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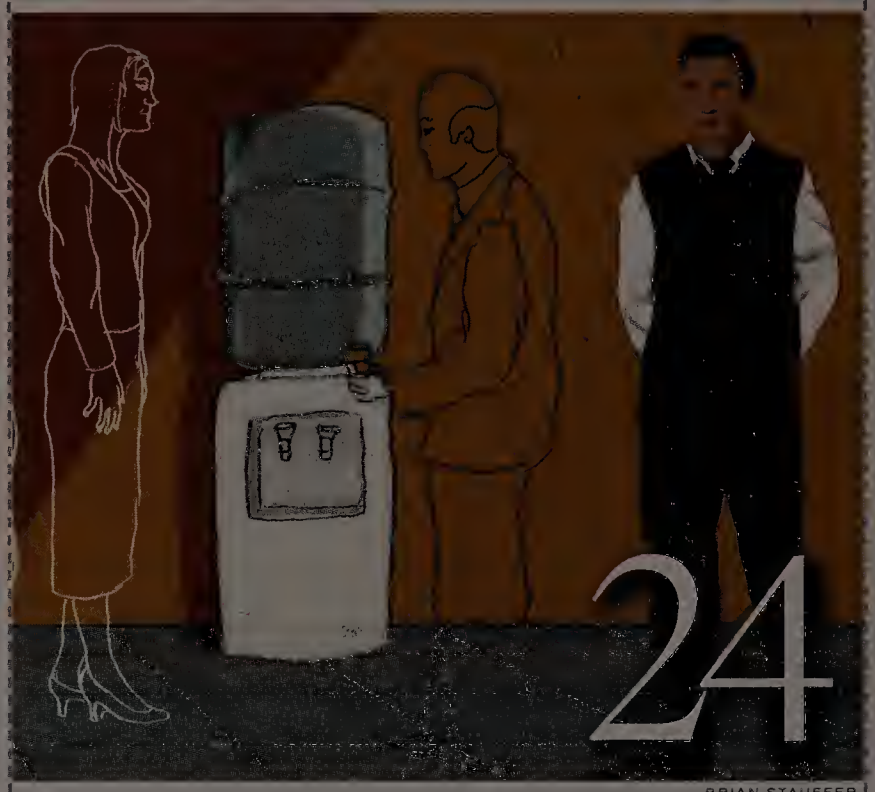

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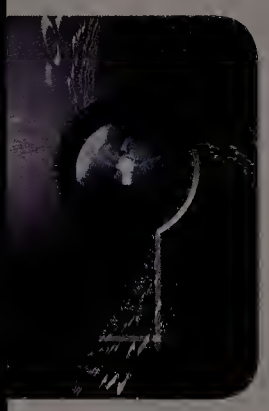

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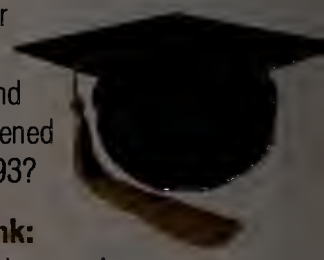

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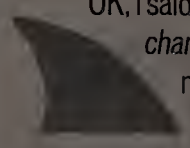

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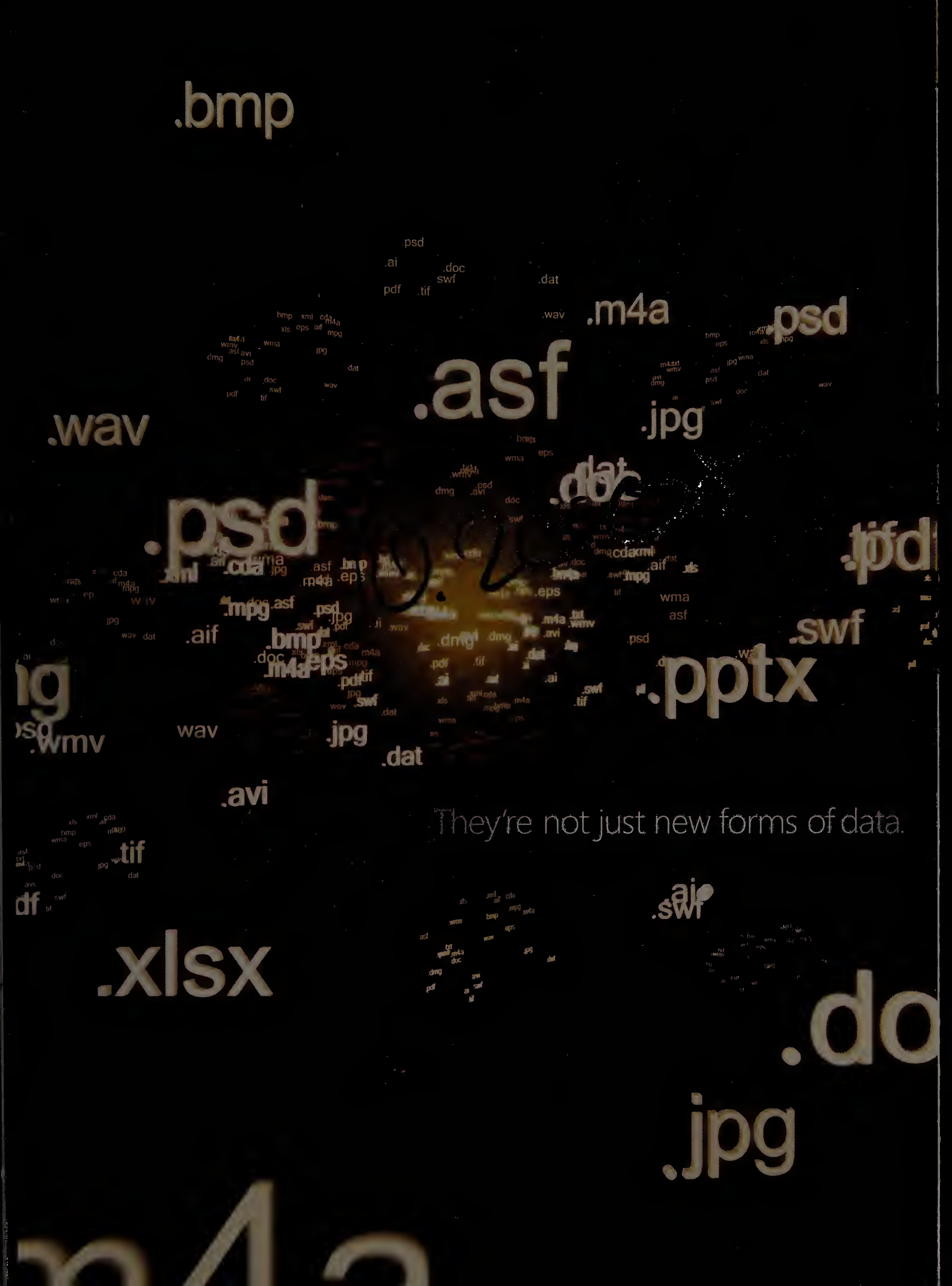

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Q&A

E-voting Security Results 'Awful,' Says Ohio Secretary Of State

How bad were they? "I thought I was going to throw up," Jennifer Brunner recalls.

Usenet: Not Dead Yet

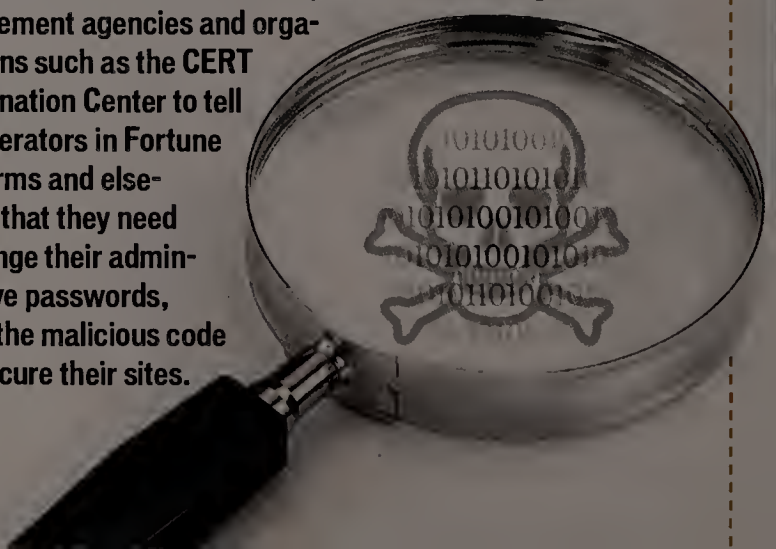
Major ISPs are cutting off access to Usenet communities. But that doesn't necessarily mean we're witnessing the final years of one of the oldest online communication systems.

Microsoft: Bad Things Happen to Firms That Use Unlicensed Windows

A company-sponsored report says counterfeit software leads to system failures, lost data and other problems.

Researcher Finds Evidence of Massive Site Compromise

The person who discovered the problem is working with law enforcement agencies and organizations such as the CERT Coordination Center to tell site operators in Fortune 500 firms and elsewhere that they need to change their administrative passwords, purge the malicious code and secure their sites.



Blog Spotlight

Vista R.I.P.

Steven J. Vaughan-Nichols: Microsoft's actions have made it clear: Vista is on its way to the Microsoft junkyard, next to similar failures such as Windows ME and Microsoft Bob.

Google Chrome = Dead, Google Search = Hot

John Brandon: Google's browser has now almost become inconsequential, a bright blip that has faded faster than John Brandon's summer tan.

Backing the Claim That Voting Systems Are Inherently Insecure

Sharon Machlis: It's not a matter of tin-foil hats, partisan politics, evil intent or ineptitude. It's basic computer system design: Lack of a paper trail makes any voting system unsafe.

Stop Ignoring Your Phone's Inner Map

Mike Elgan: You paid extra for the GPS feature in your cell phone, so why aren't you using it?

The IT Worker's Wall Street Meltdown Worry List

Some questions – and answers – about your job and your future.

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SHARKBAIT

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Fish is charged with remotely installing new software for a stock brokerage house. But come Monday morning, one trader can't find the program's shortcut icon where it's supposed to be.
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■ EDITOR'S NOTE

Don Tennant

Elusiveness of Joy

THE COLUMN I wrote last week, titled "Asperger's Oxymoron," offended some readers because of my contention that the contributions that Aspies can make to society are necessarily undermined by the degree to which they are withdrawn from society. My belief that isolation is detrimental to the human spirit and to the advancement of the human race isn't a particularly popular notion.

There are many dimensions to isolation. One that seems to be particularly common among Aspies is a detachment from social norms that, rather than manifesting itself as endearing nonconformity, tends to be more of an oblivious self-centeredness. The focus is inward, rather than outward. Take Richard Stallman.

I mentioned last week that Stallman, founder of the Free Software Foundation, had referred to himself in a 2000 interview as being "borderline autistic." While he shied away from that assessment in my interview with him in July, Stallman did acknowledge that he suspected he had a "shadow" form of Asperger's.

I knew very little about the disorder at the time, but it did strike me that he appeared to be somewhat eccentric and glaringly devoid of social grace. I thought it was cool that he felt comfortable enough to meet me in his stocking feet, so that was fine. But during the course of the interview, there was an inescapable rudeness. Just little things. It's no big deal, for example, that throughout a meeting that lasted nearly two hours, he sipped from a large mug but never offered me so much as a drink of water. It's just that it clearly demonstrates an inward rather than an outward focus.

The interview, and extensive subsequent e-mail correspondence with Stallman, reinforced a conclusion I'd drawn from a 2002 biography I'd read to prepare for our discussion: Stallman is not a happy person. There was a certain melancholy that I've since observed in other people who identify themselves as Aspies. In fact, I've observed through my untrained eye that Aspies can be content in a certain environment, but real happiness seems to elude them. Is that conclusion off-base?

■ In Aspies, there's a detachment from social norms that is more oblivious self-centeredness than endearing nonconformity.

For a reality check, I e-mailed Barbara Bissonnette, principal at Forward Motion Coaching in West Boylston, Mass. She provides career counseling for adults with Asperger's.

"I wouldn't say they are inherently unhappy people," Bissonnette replied. "Most have had lifetimes of not fitting in, being ostracized/marginalized and hearing about everything they do 'wrong.' . . . The fact that it's a hidden disability compounds the problem because people don't realize that some of the unusual behaviors of an Aspie are not intended to be rude."

That the rudeness may not be intentional doesn't make it any less off-putting. I recently received an e-mail from Roy Brander in Calgary, Alberta, who wrote that when he was president of the Calgary Unix Users Group, he invited Stallman to speak. Stallman agreed and asked to stay at a member's home rather than at a hotel.

"The guy who hosted him vowed, 'Never again,' " Brander wrote, adding that it's impossible to spend time with Stallman "and not think 'Asperger's syndrome.' " He noted that while Stallman's legendary inflexibility can be forgiven because it "may have hard-wired neurological roots," his intransigence is marginalizing him within the free software movement.

I'm now convinced that Stallman has far more than a "shadow" form of Asperger's. I'm also convinced that his relentless free software advocacy is driven by a personal distaste for proprietary software, rather than by any interest in advancing the well-being of others. Hence Stallman's joyless demeanor.

Whether or not the elusiveness of joy among Aspies is inherent, it remains painfully apparent. What brings true happiness is serving and uplifting other people — looking outward rather than inward. Aspies deserve that happiness, and they should receive whatever assistance is needed to bring it about. ■

Don Tennant *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

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Security Efforts Need Widespread Support

I read J.F. Rice's Sept. 22 Security Manager's Journal, "Making Enemies, but Needing Allies," with great empathy. In my experience, making change internally is almost impossible unless you can identify SWIFT — Specifically What's In It For Them. Unless you can find a few goodies for the other departments, they may well see war as the preferred choice.

■ **Dick Benton,** *principal consultant, GlassHouse Technologies Inc., Framingham, Mass., dbenton@glasshouse.com*

J.F. Rice is approaching the matter of security from the wrong angle. He needn't seek allies. Getting people within other IT groups to do their jobs isn't his responsibility.

A security manager's expertise is infosec technology, but the responsibility for corporate information security belongs to the CIO and other executive officers. Hopefully, Rice's fledgling group exists because executives have become aware that they, not the security manager, are personally liable for IT security. It is the CIO's responsibility to get buy-in, not the security manager's to try to build a security program using a grass-roots approach within IT. If your organization lacks this, there is no way that your group can ever be effective, and you should seek another position that isn't a career-killer.

After a few meetings, it should become obvious to all competent technical professionals that developing and implementing a security program is in their own best interests. It provides a way to clean up every daily operational issue that they've been wrestling with. If done well, it eliminates most of the frustrations and roadblocks that have stymied them in the past. And in contrast, opposing a program that has management endorsement is usually a ticket to a fast trip out the door.

One other point: If an organization thinks of IT security as a separate layer on top of an existing operation, it isn't getting full value from its technology investment. IT is about managing information. If you aren't using it as an enabler and a profitable resource for the company, you don't get it, either.

■ **Paul Schmied,** *Arlington Heights, Ill.*

Let Web 2.0 Transform Business Apps

Computerworld's Sept. 1 Spotlight on business intelligence provided insight into the potential of Web 2.0 to revolutionize usability of business applications. Until organizations can provide business users with applications that are as easy to use as consumer products, we'll never resolve the disconnect with IT. So the question is, Why has business technology lagged so far behind consumer technology?

When Apple introduced the iPod and the iPhone, it transformed consumer expectations. Web 2.0 similarly transforms what business information consumers should expect from business applications and from IT, but the industry needs to deliver upon those expectations.

Web 2.0 technology can provide unprecedented user empowerment through easier ways to access, combine and personalize data. It provides users with deeper insight through rich visualization such as panoptic views (e.g., Google Earth) and multilayered visualization (traffic info layered on top of street and terrain views). It provides new ways to share and collaborate, from instant messaging to wikis. And it fundamentally changes the economics of delivering applications through cloud computing and SaaS.

Thank you for bringing attention to this very interesting issue.

■ **Dale Skeen,** *founder and CTO, Vitria Technology, Sunnyvale, Calif.*

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News Digest

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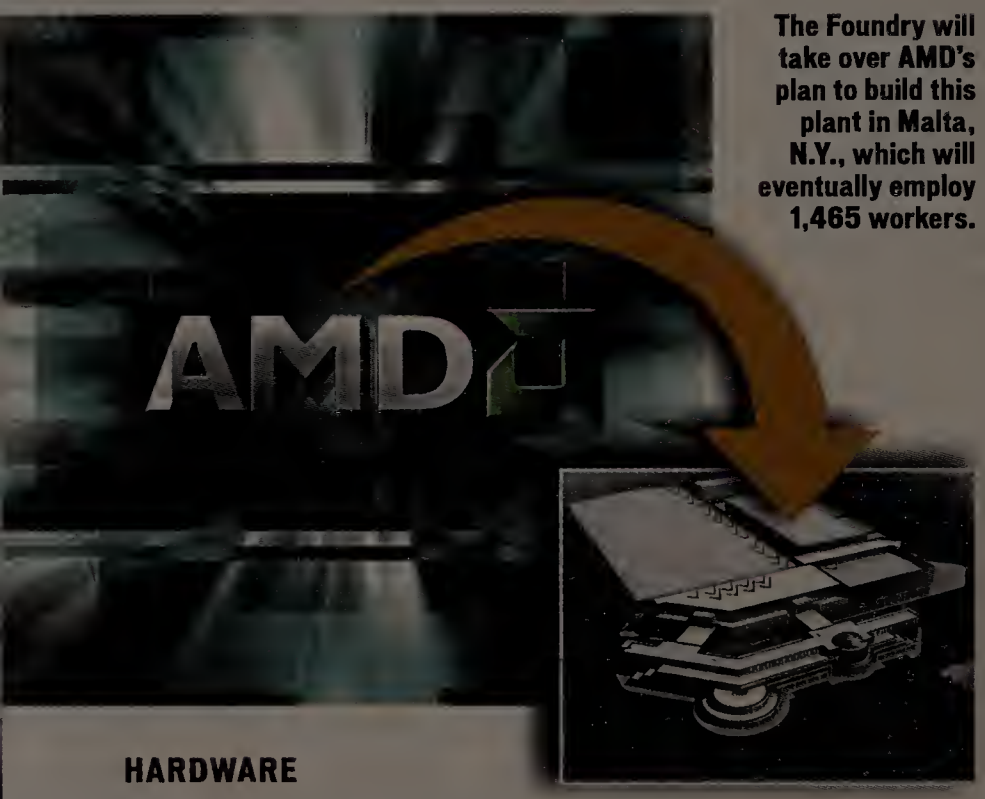
THE WEEK AHEAD

MONDAY: *Computerworld*'s fall Storage Networking World conference opens in Dallas. Gartner's Symposium/ITxpo 2008 also starts today, in Orlando.

TUESDAY: Microsoft plans to issue 11 software updates – four rated critical – as part of its monthly batch of security fixes. Also, Apple is expected to announce new notebook PCs.

THURSDAY: IBM, Google and AMD all plan to report their Q3 financial results. Intel's earnings report is due Tuesday.



The Foundry will take over AMD's plan to build this plant in Malta, N.Y., which will eventually employ 1,465 workers.

HARDWARE

Struggling AMD Spins Off Its Fab Operations

ADVANCED MICRO Devices Inc.'s move to spin off its manufacturing operations generated praise from analysts and questions from Intel Corp. about whether it violates a cross-licensing agreement between the two companies.

Sunnyvale, Calif.-based AMD last week announced it is spinning off its fabrication operations into a new firm, temporarily called The Foundry Co., to cut costs and gain an infusion of capital.

Advanced Technology Investment Co. (ATIC), based in Abu Dhabi, United Arab Emirates, paid $2.1 billion for a majority stake in the new firm. Co-owner AMD will retain a 44.4% stake.

ATIC, wholly owned by the Abu Dhabi government, will spend between $3.6 billion and $6 billion over the next five years to expand the firm's chip-making capacity, said Doug Grose, CEO of The Foundry. Grose had been senior vice president of manufacturing and supply chain management at AMD.

Meanwhile, Intel said it plans to evaluate the terms of the AMD-ATIC agreement to determine how the deal would affect the licensing pact, which, among other things, lets AMD use Intel's x86 processor architecture.

An AMD spokesman said the company structured the spin-off "in a way that takes into account all our licensing agreements to ensure The Foundry will be able to manufacture all of AMD's products."

Despite the potential licensing problem, analysts said the deal could rejuvenate AMD after two years of struggles. "The industry will be dealing with an AMD that's a good deal more nimble, because they won't be dealing with the same financial burdens or the fab plants," said Dean McCarron, president of Mercury Research in Cave Creek, Ariz.

Early in the decade, AMD had grabbed a solid footing in the market, and analysts cited its success as a reason Intel floundered between 2003 and 2005.

Intel responded in 2006 with a reorganization that curbed AMD's momentum. After that, AMD stumbled further under the weight of its $5.4 billion purchase of ATI Technologies Inc. and its delayed Barcelona chip.

In July, after AMD's seventh straight quarterly loss, Dirk Meyer replaced Hector Ruiz as CEO. Ruiz last week was named chairman of The Foundry.

— Sharon Gaudin

Windows XP Users Get Six More Months

has thrown another lifeline to Windows XP users, extending by six months its cutoff date for stopping shipments of the seven-year-old operating system to PC vendors.

Hardware makers that offer "downgrades" from Windows Vista Business or Vista Ultimate will now be

More than a third of new PCs are being downgraded to XP, according to Devil Mountain Software.

able to get copies of XP Professional through the end of next July, Microsoft said. Previously, it had planned to halt XP shipments Jan. 31.

Microsoft stopped retail sales and regular licensing of XP on June 30. But it maintained the downgrade option, which lets PC vendors install XP Professional and give users copies of Vista for possible future use.

XP may be available long past next July if vendors stockpile it. "Downgrade rights do not expire," a Microsoft spokeswoman said.

– GREGG KEIZER

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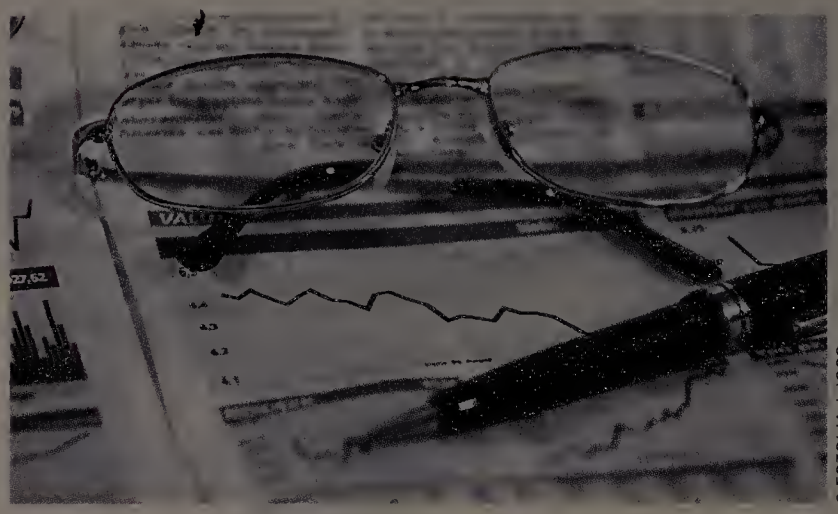

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IT SPENDING

SAP Says Q3 Sales Hit by Crisis in Financial Markets

SAP AG last week warned that its third-quarter financial results will be below expectations because of a sales drop-off in late September — a surprise occurrence that the software vendor blamed on the turmoil in the world's financial markets.

In a preliminary third-quarter announcement, SAP said that concern among corporate users over the financial meltdown "triggered a very sudden and unexpected drop in business activity at the end of the quarter."

SAP, which is scheduled to report its full results on Oct. 28, now expects software and related services revenue to total between €1.97 billion and €1.98 billion (about $2.7 billion U.S.). That would be an increase of as much as 14% over last year but less than the company had been expecting.

Henning Kagermann, SAP's co-CEO, said during a conference call with reporters and analysts that the vendor thought it would hit its original sales plan until the financial crisis worsened.

"We executed well during most of the third quarter," Kagermann said. But the economic woes are having "a strong impact on our ability to sign contracts," he added. "Many customers expressed the need to focus on shorter-term concerns and put planned IT investments on hold for now."

Kagermann disclosed that SAP is implementing some cost-cutting measures, including a reduction in temporary workers and a hiring freeze in which employees who leave won't be replaced.

Consulting firms Gartner Inc. and Forrester Research Inc. both forecast recently that despite the meltdown on Wall Street, IT spending will continue to grow, though at reduced rates.

And in a preliminary earnings announcement of its own, IBM didn't show any of the same ill effects that hit SAP. IBM, which plans to report its results on Thursday, said that third-quarter net income will be up 20% year-over-year and that it remains on track for profit growth of at least 22% for the full year.

— Chris Kanaracus and James Niccolai, IDG News Service

Short Takes

Sun Microsy[illegible] today plans to introduce a four-socket midrange server based on its UltraSparc T2 Plus processor. The Sparc Enterprise T5440 supports up to 32 processor cores and is priced from $44,995.

Oracle Corp. agreed to purchase Primav[illegible] Systems Inc., a maker of project portfolio management software, for an undisclosed sum. Primavera will be part of a new Oracle business unit headed by Primavera CEO Joel Koppelman.

Symantec Cor[illegible] has agreed to pay $695 million to buy Mes[illegible] Ltd., a U.K. provider of hosted filtering services for spam and Web traffic. The offering will be added to Symantec's Protection Network of hosted back-up, data restoration and remote access services.

Teradata Cor[illegible] today is set to unveil Version 13 of its namesake decision-support database, along with a data warehousing appliance that company officials said can handle up to 50 petabytes of data.

HIRING AND RECRUITING

Feds Find High Level of Fraud in H-1B Petitions

A recent review of 246 H-1B visa applications by U.S. Citizenship and Immigration Services (USCIS) found that 21% contained fraudulent information or "technical violations" of federal laws and regulations.

The violation rate was even higher in cases involving computer professionals. Twenty-eight of the 104 that were examined, or 27%, had violations of some sort, according to a USCIS report that was finalized in September and publicly released last week by Sen. Chuck Grassley (R-Iowa).

USCIS investigators examined a random sample of the nearly 97,000 H-1B petitions filed in late 2005 and early 2006. They found problems such as forged signatures, fake degrees and the use of shell companies in applications. Other issues were discovered during visits to work sites. For instance, some employers "benched" H-1B holders when work wasn't available or had them doing jobs that weren't listed on their visa applications, the report said.

The report's authors called the level of fraud a "significant vulnerability" for the H-1B program and wrote that the USCIS is making "procedural changes" in response to the findings. An agency spokesman said Friday that possible steps include checking applications against external records and using fraud indicators to flag petitions for increased scrutiny.

– PATRICK THIBODEAU

Businesses with 25 or fewer employees and revenue of less than $10 million had higher rates of H-1B fraud than larger companies did, the USCIS said.

Of 114 cases involving workers from India, 25% were found to involve fraud or technical violations. No other countries had statistically valid samples.

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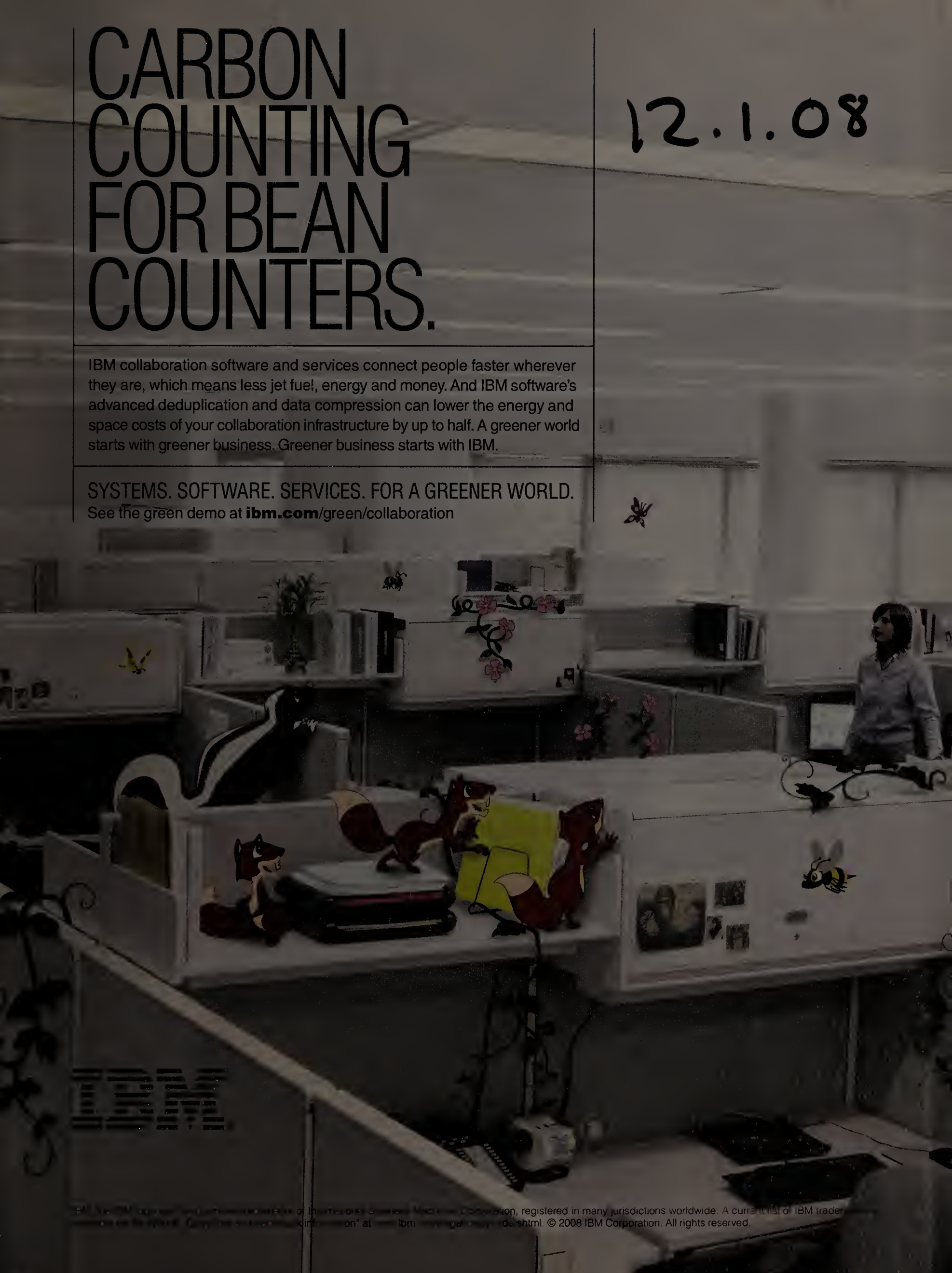

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HARDWARE

UPS Tests Devices That Keep Track of Truck Data

Motorola's VC6096 is an on-board ruggedized mobile computer.

UNITED PARCEL Service Inc. is testing a new ruggedized mobile computer in its trucks that can wirelessly log departure and arrival times and provide managers with data on vehicle speed and idle times.

Test versions of Motorola Inc.'s VC6096 Windows Mobile-based system, unveiled last week, have been installed inside long-haul UPS trailer trucks and large trucks that move packages among sorting facilities.

A spokeswoman wouldn't say how many of the computers Atlanta-based UPS plans to buy, but she noted that it will be a "sizable" number by the time the company's deployment is completed, which is expected in 2010.

The computers will be generally available early next year for $4,395.

The spokeswoman said UPS has used the system to measure and compile truck speed, RPM, braking and idle-time data. More functions will be tested later.

The 4.8-lb. computer includes a keyboard, a 6.5-in. touch display, 128MB of RAM and 256MB of flash memory. It supports Wi-Fi, GPS and Bluetooth wireless specifications.

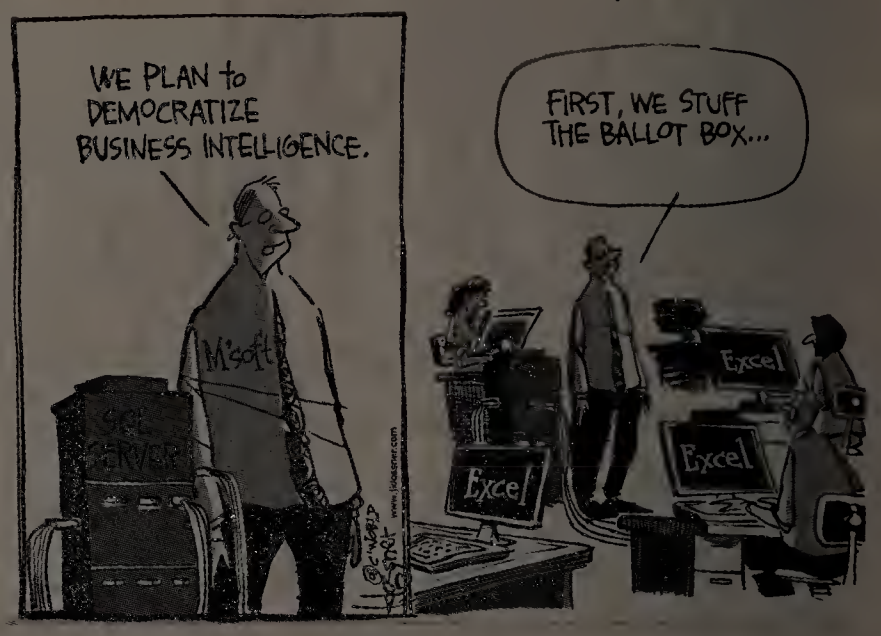
UPS said its 100,000-plus drivers will continue to use their fourth-generation proprietary handhelds jointly built by Motorola and Symbol Technologies Inc., which Motorola acquired last year.

Kevin Burden, an analyst at ABI Research, said vehicle telemetrics have long been controversial because of fears that management will invade drivers' privacy.

Despite these concerns, Burden said companies such as J.B. Hunt Transport Services Inc. have found that they can use such systems to "stay on top of the workforce in the trucking business, where time is everything."

— Matt Hamblen

BETWEEN THE LINES *By John Klossner*



Despite tightened credit markets, Brocade Communications Systems Inc. secured a $1.1 billion loan needed to help fund its $3 billion acquisition of Foundry Networks Inc.

IBM launched an open beta release of Bluehouse, a Web-based service that combines social networking and online collaboration tools for business uses.

NeXT Computer Inc., founded by Steve Jobs after he temporarily left Apple, unveiled its first workstation. The cube-shaped system was a commercial bust, though.

Global Dispatches

Bull Acquires German Computer Maker For €26M

LES CLAYES-SOUS-BOIS, FRANCE – Bull SA last week agreed to buy Science + Computing AG, a maker of high-performance computers, for an undisclosed sum.

Bull CEO Didier Lamouche called the acquisition a key piece of the company's three-year move into the high-performance computing business.

Tübingen, Germany-based Science + Computing reported revenue of €26 million ($35 million U.S.) for its fiscal year, which ended in June. Bull, based here, said Science + Computing will operate as an independent firm.

Bull last week also agreed to sell its U.S.-based Medicaid services business to Ingenix Inc. in Eden Prairie, Minn. Terms of the deal were not disclosed. The business provides business intelligence tools to human services agencies.

Mikael Ricknäs,
IDG News Service

Toshiba Plans for Fuel-Cell Launch

TOKYO – Toshiba Corp. last week said it plans to unveil before March 31 its first commercial direct-methanol fuel-cell device, which offers fast recharges of portable electronic devices.

Toshiba wouldn't identify the product to be unveiled but had displayed a cell phone running on a fuel cell at the Ceatec trade show here this month.

Direct-methanol fuel cells produce electricity from a reaction between methanol, water and air, and are often called a greener source of energy than traditional batteries.

The phone shown at Ceatec was powered by a fuel cell under the keypad. Although the phone was a prototype, the build quality was close to that of a commercial product.

Martyn Williams,
IDG News Service

BRIEFLY NOTED

IBM this month announced plans to open a £2 million ($3.4 million) data center in Greenock, Scotland, early next year to manage and run IT operations for midsize businesses.

Jeremy Kirk,
IDG News Service

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Enterprise-class solid-state drives like STEC Inc.'s ZeusIOPS offer better speed and performance than platter-based storage – at a premium price.

Solid State Not Yet On Solid Ground

But some companies could find a strong ROI despite the high price tag, analysts say. By Todd R. Weiss

COMPANIES are slowly starting to more closely evaluate solid-state storage technologies, though most are still waiting for the cost to come down before implementing it.

Several users interviewed recently agreed that solid-state technology could one day boost their companies' bottom lines, but none were ready yet to jump on the bandwagon.

For example, Michael Loffredo, an IT regional manager at Cushman & Wakefield Inc., a real estate company in New York, said that he has tried to determine whether solid-state technology's strong performance, lack of moving parts and increased power efficiency could justify the significant upfront cost.

His analysis found that "the cost is still too expensive," he said.

Loffredo said the company is holding off on any testing of solid-state drives in its IT labs until the costs come down to just 25% to 30% more than traditional hard disk drives.

Jim Handy, a semiconductor market analyst at Objective Analysis in Los Gatos, Calif., estimates that the average cost of a solid-state drive today is $5,000, compared with $300 for a high-speed, platter-based hard drive.

> "Cost is still kicking us in the butt."
> RAPHAEL GARCIA,

Despite the wide cost disparity, Handy said that companies shouldn't simply write off solid-state storage because of the high price. He suggested that a study of how the technology affects storage costs could show that savings would come sooner than expected.

For example, he said, multiple hard drives could be replaced by a single solid-state offering. Currently, "data you don't need that often is on slower drives, and needed data is on faster drives," Handy said. A company could replace those hard drives with a single solid-state one, which would provide a strong return on investment, he said.

Handy noted that some IT departments "short-stroke" hard drives by placing data only on the outer edges of large-capacity disk drives to ensure fast access. In those cases, users are spending money for a significant amount of unused storage capacity. A solid-state drive offers top performance even when it's filled to capacity, he said.

"That is like the easy prey for the use of enterprise solid-state drives," especially for businesses running more than 100,000 hard disk drives, Handy added.

Loffredo noted that solid-state drive vendors could quickly boost sales to corporate IT by improving trade-in policies. "If the hardware companies were a little more aggressive in their buybacks [of older equipment], that would help" companies deal with high solid-state costs, he said.

Cushman & Wakefield

Continued on page 14

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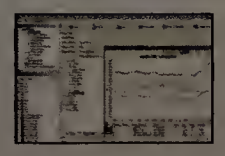

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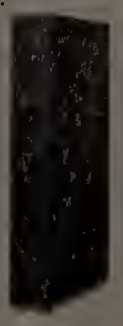

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Continued from page 12

could benefit from using solid-state storage products to store e-mail for its 4,700 users — if the price was right. Most of the company's agents save old e-mails to use in future communications with past clients. Storing the documents from that many users requires strong storage and retrieval speeds, Loffredo said.

George Crump, an analyst at Storage Switzerland LLC, predicted that many companies will start turning to solid-state storage systems once they can prove that they significantly boost business.

Businesses like stock traders and financial services firms, which depend heavily on fast data-flow speeds, could benefit from the technology today, Crump said.

He noted that companies can choose from two types of solid-state drives: dynamic RAM-based and flash-based devices. DRAM storage is faster but costs far more than flash-based.

For example, 2TB of flash-based storage costs about $180,000, compared with about $1 million for the same amount of DRAM-based storage. "DRAM is faster, but if flash does it for you, why spend the extra money?" Crump asked.

DRAM-based drives, which can read or write data in 0.015 milliseconds, operate at a random speed of 400,000 I/O tasks per second, Crump said. The drives are best for write-intensive software and for businesses that use high-performance database applications, he added.

A flash-based storage drive can read or write data in 0.2 milliseconds and operates at read speeds of up to 100,000 I/O tasks per second and write speeds of up to 25,000 I/O tasks per second, Crump said. The technology is best for "read-heavy applications," he added.

LINGERING SKEPTICISM

John Webster, an analyst at Illuminata Inc., said that enterprise buyers are starting to understand the technical and performance benefits of solid-state drives, but most believe they can get by without them. "It's the typical response," he said. They are "a little bit skeptical at this point."

Raphael Garcia, a backup and storage administrator at the Queens Library in Jamaica, N.Y., said solid-state technology could save his organization money over the long run, but as a public entity, the library lacks start-up funding. "Cost is still kicking us in the butt," he said.

> **"A lot of bleeding-edge technologies are real nice. But when you boil it all down, how much of it do you really need?**
>
> **MICHAEL MCCARDLE,**
> STORAGE TECHNOLOGY MANAGER, OPPENHEIMER & CO.

The use of the more rugged solid-state drives in laptops for library personnel could result in long-term savings, he said. "They could cost more initially, but then they could save money on maintenance and repairs," Garcia said.

A systems administrator at a New York-based financial services firm, who asked that his name not be used, said his company has been eyeing solid-state storage technology but hasn't yet decided whether to implement it.

"My company doesn't like bleeding-edge," he said. "They like proven technologies. Down the road, we're going to look at it hard, think hard and reassess the benefits, which may be many."

Ultimately, the performance benefits of the technology could force the firm to spend the extra dollars. "Without speed, we're dead," he said.

Oppenheimer & Co. doesn't need the new technology at this point, said Michael McCardle, storage technology manager at the New York-based financial services company.

"A lot of bleeding-edge technologies are real nice," he said. "But when you boil it all down, how much of it do you really need?"

Today, Oppenheimer has hard drive storage technologies that provide adequate speed at costs that can be rationalized for the company's 4,000 or so users, McCardle said. "It goes back to the needs of the business," he said. "If the need doesn't exist, then the interest is minimal."

The company's storage technology needs are re-evaluated when business requirements change, but "the purse strings are very tight these days," he noted. "Until we feel pain that will drive the need for a technology refresh," a move to emerging technologies like solid-state storage won't happen.

A storage architect at a New York-based publishing company, who also asked not to be identified, said the benefits of solid-state wouldn't come close to equaling the costs for businesses in his industry.

"We don't have the applications that necessitate them," he said. "We deal with a different data set compared to firms that do data analysis. We deal with content creation. We find that second-tier storage [such as Serial ATA technology] is adequate for even our highest-performing applications."

Handy noted that to date, only a small percentage of solid-state drives sold are used by large IT organizations. Of about 500,000 sold annually today, only 20,000 are purchased by corporate IT operations.

Objective Analysis projects that the number of solid-state storage devices sold to data centers will increase to 2 million per year in 2013, though it will remain a small percentage of that year's projected sales of 50 million units. Solid-state sales will also continue to lag far behind shipments of hard-disk products, which Handy projects will reach 800 million in 2013.

Meanwhile, IDC estimates that solid-state drive sales totaled $396 million in 2007 and that the total will grow at a 70% compound annual growth rate through 2012, said Jeff Janukowicz, an analyst at the firm. Over the long term, he said, "the real growth engine will be derived from new markets that solid-state drives are just now beginning to penetrate. Thus, we think the future continues to look bright."

To push the new technology into corporate data centers, the Storage Networking Industry Association last month unveiled a solid-state storage initiative targeting IT executives.

The initiative aims to show the benefits of the technology and to foster standards, said Phil Mills, secretary of the SNIA board of directors. ■

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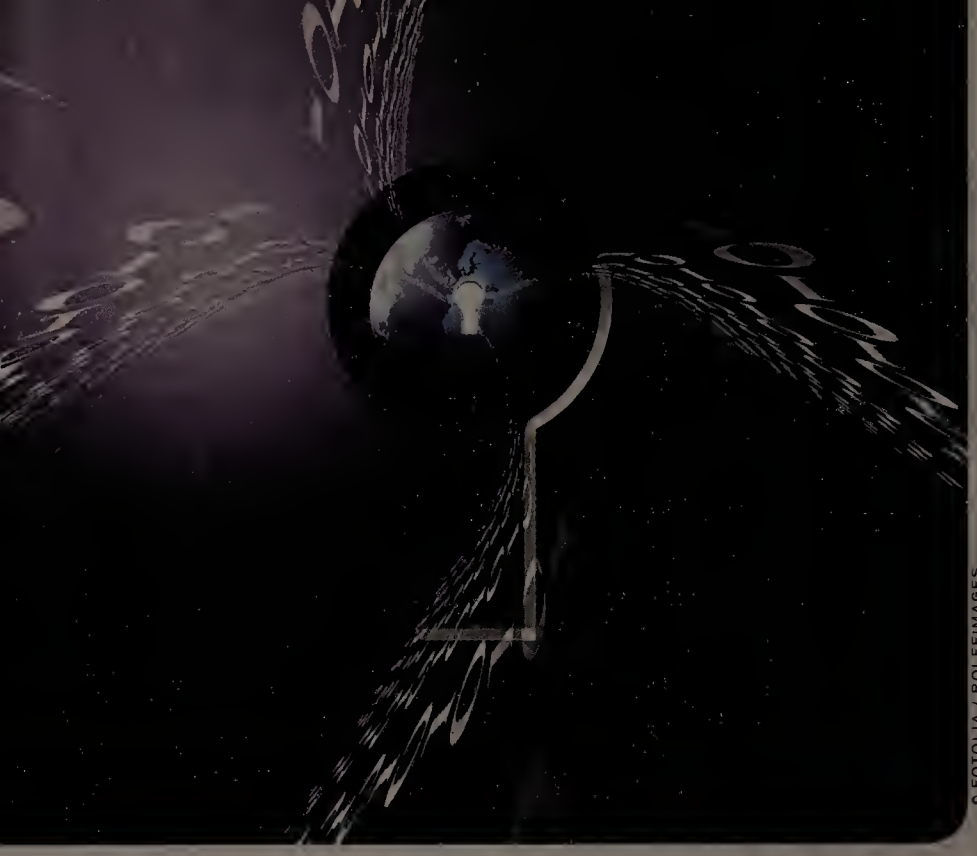

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■ NEWS ANALYSIS

Microsoft Looks To Unlock Door To Wider BI Use

Its new plan: Scale up SQL Server to support larger data warehouses, and use Excel to spread business intelligence to more users. By Eric Lai

SQL SERVER may be one of the most popular databases among corporate users, but Microsoft Corp. is a relative laggard in the business intelligence market. It ranked just fifth among BI vendors last year, according to market research firm IDC.

But Microsoft last week detailed a multipronged strategy aimed at scaling up the size of the data warehouses that SQL Server can support into the hundreds of terabytes while also — in the vendor's words — democratizing BI within companies through the use of Excel and other Office applications.

In particular, Excel may turn out to be Microsoft's BI ace in the hole.

The ubiquitous spreadsheet is already the most popular front-end program among business analysts and other workers looking to display and analyze the results of BI queries, said James Kobielus, an analyst at Forrester Research Inc.

Now, via a self-service analysis project code-named Gemini, Microsoft plans to develop "an Excel-based user analytics mashup tool" designed to make it easier for end users to build their own BI applications, Kobielus said in an e-mail. He called Gemini a "game-changer" for the BI market.

Some IT managers whose companies use SQL Server were also impressed by what they heard about Gemini, which Microsoft plans to ship as part of a BI-oriented release of SQL Server 2008 that is code-named Kilimanjaro.

LACKING RESOURCES

David Smith, CIO at ServiceU Corp., an event management and ticketing services provider in Memphis, said his IT staff has "a limited number of man-hours" that it can devote to BI projects for end users. And he doesn't think ServiceU is alone in that regard.

"Microsoft has correctly determined that the limiting factor for most businesses to implement significant BI projects is the scarcity of IT resources," Smith said. In some cases, that means workers are shut out from using BI tools, he added. But to Smith, Gemini appears to offer a way of making analytic capabilities available on a much broader scale.

Mayur Raichura, vice president of information services at Long & Foster Real Estate Inc. in Chantilly, Va., also thinks that Microsoft's plan will enable more users to analyze data without IT's help.

And Excel's ability to handle millions of rows of data in memory should make it possible for Long & Foster to examine large amounts of data from the company's transaction systems and its Web site search logs, according to Raichura. If so, that will "position us to deliver a better financial analysis in a real-time mode," he said.

At its second annual BI conference, held in Seattle, Microsoft said that a Community Technology Preview (CTP) version of Kilimanjaro and Gemini will become available within a year. Commercial shipments are scheduled to follow in the first half of 2010.

Kilimanjaro is also being designed to support large data warehouses and BI deployments. To help with that, Microsoft detailed another project, code-named Madison, under which it will integrate SQL Server 2008 with technology developed by Datallegro Inc., a data warehousing appliance vendor that Microsoft acquired last month.

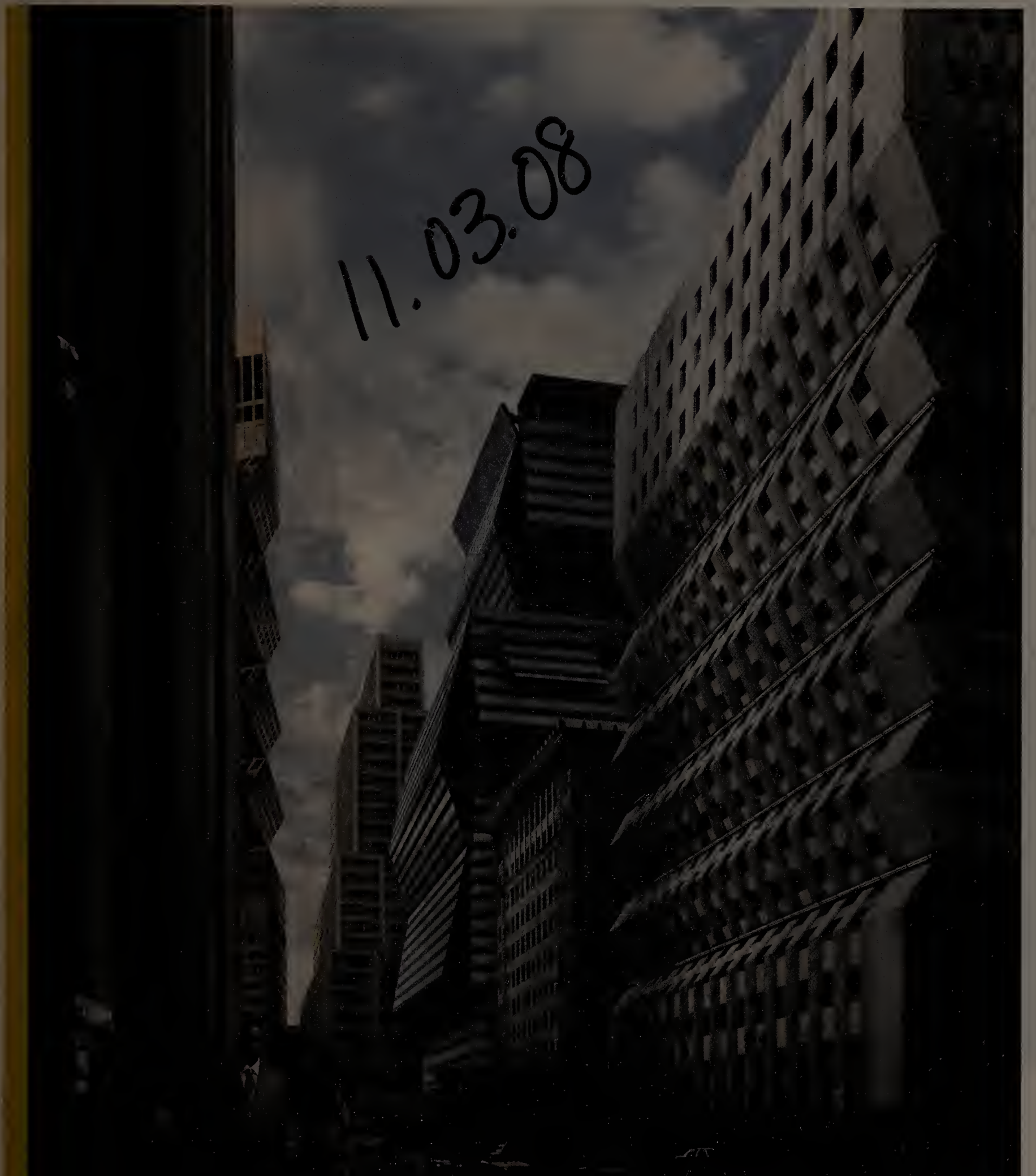
Microsoft has plenty of catching up to do with other vendors at the high end of the BI market, Kobielus said. SQL Server typically scales only "into the dozens of terabytes" now, he noted.

The Madison technology will be able to handle workloads involving hundreds of terabytes of data and thousands of users, Microsoft said. The company demonstrated a 150TB database running 24 instances of SQL Server 2008 at the conference. A CTP version is due within 12 months. And Microsoft said it's working with server and storage vendors, including Dell, EMC and Hewlett-Packard, to give users "an appliance-like buying experience."

But even with the addition of Datallegro, Microsoft is well behind rivals such as Teradata Corp. in high-end market share. Curt Monash, an independent database analyst, said that although Datallegro's technology was strong, the appliance vendor had few customers before Microsoft bought it. ■

Heather Havenstein *contributed to this story.*

11.03.08



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MICHAEL LEWIS

Dossier

Name: Steven Rambam

Title: Founder and CEO

Organization: Pallorium Inc.

Location: Brooklyn, N.Y.

Favorite technology: "E-mail with attachments. I don't think I've turned on my fax machine in years."

If he wasn't in this business, he'd probably be: A reporter.

Number of times he's been shot at on the job: "It's bad karma to count."

Favorite nonwork pastime: Anything on or near the water.

Philosophy in a nutshell: Do the right thing, no matter the personal cost.

Favorite vice: "I'm not going to tell you. I can assure you that it's not chocolate."

Favorite movie: "*Ruggles of Red Gap*, with Charles Laughton playing a butler who is gambled away by a British lord and relocates with his new master to Red Gap, Mont. It's the most patriotically positive movie ever made about America."

■ THE GRILL

Steven Rambam

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Continued on page 20

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"I have in my office databases that are far more powerful and comprehensive than J. Edgar Hoover's wildest dreams.

Continued from page 18

vehicles, driver's licenses, bankruptcies, liens, judgments — I could go on and on.

Who has access to your data? This is a database that's restricted to law enforcement, private investigators, security directors of companies and people who have a genuine need.

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What has changed in the past few decades? Two things. The first is computing power. I have in my office storage and databases and artificial intelligence scripts and behind-the-scenes links that are far more powerful and comprehensive than J. Edgar Hoover's wildest dreams.

The other thing is the mind-boggling level of self-contributed data. The average person now willingly puts on the Internet personal information about himself that 20 years ago people would hire an investigator to try and get. It's extraordinary. If you know how to use the Internet, 75% of an investigation can be conducted sitting in your pajamas.

Do you see this as a bad thing? On the contrary, there are good reasons for most of this to be out there. It's not out there because these are nefarious, evil people trying to be the new Big Brother. It's because this is truly a new engine of capitalism. Where it gets a little creepy is when they aggregate all of this data together and have an extraordinary profile of you.

How can businesses protect their intellectual capital, particularly when it's in electronic form? You can have five firewalls in a safe room with the most current locks monitored by 24/7 motion-detecting, IP-addressable cameras, and all of that is meaningless if a 16-year-old kid can social-engineer a root password out of you. The downside to all of this publicly available information is that it's now a lot easier to social-engineer somebody.

Should businesses hire a company like yours? They should if they don't want a back door or a Trojan [horse] on their system. A year ago, a company called me from Hong Kong and said, "We're being extorted. We're getting e-mails from an individual saying if we don't give a series of payments through PayPal, he is going to take [our] source code and post it on the Internet."

We were able to determine who the guy was in 24 hours. He was a 14-year-old kid in California.

What about smear campaigns on the Web? If you're a victim, what should you do about it? You have to have zero tolerance. You have to find out who the person is, and you have to sue them within an inch of their life, and you have to do it publicly and post it on your Web site, talking about the entire case from beginning to end.

Government databases are the biggest repository of private information. Should the public be concerned about that? The scary thing to me is not that information is open, but that the government is trying to use every pretext and every trick to hide information from its citizens. That I think is much more nefarious and will be much more detrimental in the long run than having information out there.

Some of the things the Bush administration is doing are just incomprehensible. For example, they're reclassifying data that's been in the public eye — that has been available to the public since 1991. Why, I can't begin to guess.

Another slippery, slimy thing is that the FBI has signed contracts with some private data providers. Polygraphs [and] background investigations are being outsourced, and the Freedom of Information Act does not apply. If you say to the FBI, "I want the report that ChoicePoint furnished to you about me," they say to you, "Sorry, we can't give that to you. That's a private business record." This is really a fairly sinister development. And it's one that's profoundly un-American.

Given the amount of personal information out there and the fact that you aggregate it, does the public have reason to fear the misuse of personal data controlled by PallTech or other aggregators? No, because frankly, we are more accountable than the U.S. government. You can sue us; you can subpoena us. You can hold us to task if we do something improper. Not so the U.S. government.

Can people protect their privacy by creating an anonymous Web presence? If you think when you do a search on Google that because you're not logged in and your IP address is being assigned from a Verizon pool that you're anonymous, that's ridiculous.

So where are we going? Privacy is dead. Get over it. You can't put the genie back in the bottle.

— *Interview by* **Robert L. Mitchell**

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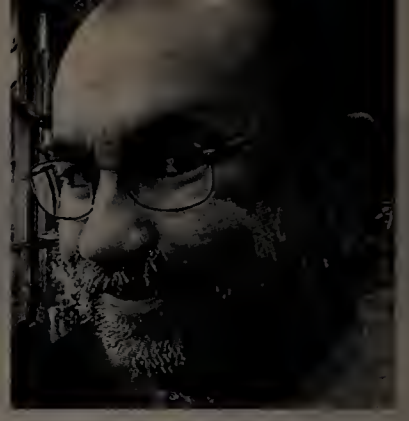

QUIZ TIME. Get out your No. 2 computers and answer the following question: For the fastest and most reliable high-end computing for your enterprise, will your operating system be 1) Linux, 2) Solaris, 3) OpenVMS or 4) Windows?

OK, put your mice down. If you answered Linux, give yourself 10 points; Solaris, 9 points; OpenVMS, 8 points; Windows — pardon me, what are you doing in this class? Remedial IT is down the hall. Just listen for the chorus of "Are you sure your PC's power cord is plugged into the wall socket?" You can't miss it.

Microsoft, after spending decades paying no real attention to high-performance computing, wants to be an HPC player with the release of HPC Server 2008. Can you believe it? Yes, there was Windows Compute Cluster Server 2003. After a long search, I found one user. He told me, "Updates that require reboots are far too frequent for production-use systems," "Jobs randomly crash," and "Few HPC applications actually support Windows compute nodes."

Will HPC Server 2008 be any better? I don't see how it can be, really. On the plus side, it's built on top of Server 2008. To me, Server 2008 is easily the best Windows server operating system ever. But a good, solid server is only the start for HPC. While HPC Server 2008 has all the right buzzwords — high-speed networking support, cluster management tools, advanced fail-over capabilities, etc. — it also has all of Windows' historical baggage of bugs and bloat.

In addition, HPC Server 2008 requires signed drivers. That means that although in theory it will support high-speed networks, if your network fabric vendor hasn't jumped through Microsoft's driver hoops, you won't be able to use its products with HPC Server. For example, QLogic has just started working on beta drivers for its InfiniBand networking products.

■ Will HPC Server 2008 be any good? I don't see how it can be, really.

Now take Linux. More than 80% of the world's fastest supercomputers already run Linux. Many of the major stock exchanges are switching over to Linux, usually from Solaris. To the best of my knowledge, the only important stock exchange that runs Windows is London's. You know, the one that crashed for an entire day a few weeks back. Flops like that sure make me want to put my enterprise's most important high-speed computing on Windows. Yes, indeed.

Linux, Solaris, OpenVMS and other high-end operating systems like AIX, HP-UX and z/OS already have tried-and-true hardware support and working HPC applications. To do HPC right is always challenging, but there are already many excellent products out there. I just can't imagine trying to build a corporate HPC at this point on not only an unproven operating system, but one that's based on a system that was never, ever meant for high-end computing.

Despite all this, I've been reading comparisons between Windows HPC and the just-announced Red Hat HPC Solution, which combines Red Hat Enterprise Linux with Platform Computing's Platform Open Cluster Stack 5. The discussion has been focusing on the license fees. Excuse me?

While looking at the real price of software is always interesting if you're a CIO or CFO — especially when it's Microsoft's maze of Enterprise Assurance maintenance agreements and Client Access Licenses — let's get real. Windows often requires you to reboot for major updates. Linux doesn't. Let's say you need to reboot, as a matter of course, six times a year with Windows HPC. With Linux, you don't.

If you think that doesn't sound like much, think again. This is HPC, not your PC, and not your ordinary server. Six hours of downtime in a year, all by itself, is a major failure in HPC. I don't care what kind of sweetheart deal you're getting from Microsoft; there's no way you, or anyone else, can afford Microsoft HPC Server 2008. ■

Steven J. Vaughan-Nichols *has been writing about technology and the business of technology since CP/M-80 was cutting-edge and 300bit/sec. was a fast Internet connection — and we liked it! He can be reached at sjvn@vnal.com.*

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TRBA

The Trouble WITH Telecommuting

Telework can change office dynamics. Here are six questions to

BRIAN STAUFFER ILLUSTRATION

TELECOMMUTING is back on workers' radars in a big way these days, thanks to gas prices that were a whopping 30% higher this summer than last.

Telecommuter wannabes are lining up outside their bosses' offices with work-from-home plans in hand, and many of them could get their wish this time around: According to WorldatWork, an association of human resource professionals, 40% more employers are offering telework programs this year than last year. Should your IT employees be part of that burgeoning crowd?

It's certainly tempting to say yes. Increasing fuel costs and heightened corporate environmental consciousness are magnifying many of the benefits of telework, including conserving fuel (and money), reducing traffic congestion (and CO_2 emissions), and reducing space and energy use at the employer's facility. Employers also often find that they're better able to attract and retain talented workers with the flexibility and increased job satisfaction that telework programs offer.

All of that is driving a huge number of inquiries from organizations looking to deploy more systematic, companywide telework programs, says Josh Holbrook, an analyst at Yankee Group Research Inc.

That said, IT and telework don't have an unblemished record of success. In 2006, Hewlett-Packard Co. ended teleworking arrangements for hundreds of its IT workers. And early this year, Intel Corp. began requiring more than half the teleworkers in its IT group to report to the office at least four days a week. In both instances, the companies indicated that teleworking had had a negative impact on IT employee productivity and collaboration.

Although a few reversals of telework policy do not constitute a trend, those cases should caution technology managers who might

ways you hadn't anticipated.
e before you say yes. By Tam Harbert

otherwise be inclined to say OK to telecommuting.

"These instances get attention because they cut against the grain," Holbrook says. "The trend is overwhelmingly in the other direction."

Nevertheless, in some instances, managers or even whole business units have "gone rogue," he says, allowing employees to work from home without the right technology, policies and procedures in place. "It's very possible for a well-meaning manager to shove the employee out of the corporate jet without a parachute," Holbrook warns.

Some telework decisions are fairly obvious. Most managers wouldn't let a new, inexperienced employee telework until he had proved himself, for example. But there are other, more subtle aspects of a person's character and work style and a company's culture that can make or break a telework arrangement.

Computerworld talked with telework experts and IT managers to discover some of these nuances. Before you approve telework, make sure you've asked yourself and your employees these tough questions.

1 SHOULD FULL-TIME TELECOMMUTING BE AN OPTION?

Some IT jobs will never be candidates for telework. Either the employee is physically required on-site — to repair client hardware, for example — or the job requires a lot of communication, interaction and collaboration with others, such as managing relationships between IT and business units.

Other times, the situation is less clear. The work can be performed remotely, but should it be?

Telework is best for those with task-oriented jobs and for people who need little face-to-face communication, says Scott Morrison, an analyst at Gartner Inc. "Can they get through a day's work without leaving their desk?" he asks. "Then they can do their job remotely."

But just because they can doesn't mean they necessarily should. The most successful telework arrangements are those that still bring the worker into the office at least some of the time.

Dennis Cromwell, associate vice president for enterprise infrastructure at Indiana University in Bloomington, lets 10 to 12 of his 75 employees telecommute — but not every day. They are mostly systems and database administrators who work alone on the computer and communicate chiefly via phone and e-mail. The arrangement has worked well — so well that Cromwell has cut the number of offices that one of his teams requires from six to two.

Still, because he wants to keep informal communication flowing, he won't allow anyone to telework 100% of the time, except in rare circumstances.

2 HOW WILL YOU DEFINE AND MEASURE PERFORMANCE?

Most experienced managers stress that you must establish well-defined performance measures for teleworkers and then judge performance accordingly.

On the face of it, that approach seems simple enough. For task-oriented jobs, it's easy to measure performance in terms of output. For an IT support person, for example, you might track how many cases he handled per day and whether problems were successfully resolved.

But such an approach implies that it doesn't matter how much time it takes to do the job. And that raises a sometimes thorny question: Are you paying employees for their output, their time or both? Some people work faster or more efficiently than others, especially when working from home. If an employee hits his output working only four hours a day, is that a win-win situation or poor use of that employee?

"People say they manage by results, but they also like to know whether the person is only active a few hours a day," says Eric Spiegel, CEO and co-founder of software start-up XTS Inc. In a previous job as an IT manager, Spiegel had bad experiences allowing staffers to telework. Members of his team were sometimes unavailable during work hours, and he had trouble scheduling meetings.

Continued on page 28

Why Intel Pulled the Plug

WHEN HEWLETT-PACKARD CEO [illegible] told IT teleworkers back into the office in 2006, he said he was trying to foster better teamwork. [illegible] was in the midst of a major IT overhaul, consolidating [illegible] centers into six facilities.

Low productivity on collaborative projects was [illegible] for Intel's recent crackdown on IT teleworkers. The company's move was not a change in policy, but rather a decision to [illegible] the rules around its existing policy, says Intel CIO Diane Bryant.

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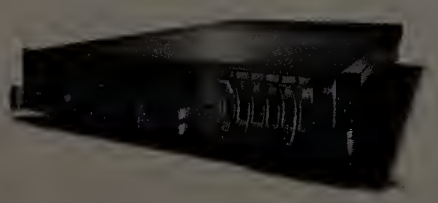

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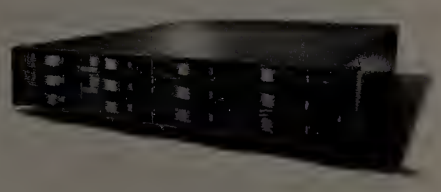

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> **"Some people are like the gel that holds the organization together."**
> ROBERT KEEFE, CIO, MUELLER WATER PRODUCTS INC.

Continued from page 26

To avoid such problems, he says, you should decide upfront whether meeting deliverables is enough, or whether you will require employees to be at their phone and computer at certain times and for a certain number of hours.

3 WILL CREATIVITY SUFFER?

Beyond the hours-vs.-output debate, there's a larger question that pertains particularly to jobs where deliverables can't be easily quantified: Are you getting the same level of intellectual investment from your remote employees as you would if they were in the office?

In software design, for example, creative ideas can be the most valuable output. Should you measure performance based on creativity? Will workers be more creative at home — or less?

Maybe you should measure quality rather than quantity. If so, what constitutes high quality? The answer will depend on the person and the type of job. The important thing is to have a frank discussion of what's expected — including intangibles like creativity — before you allow an employee to telework, with the understanding that the arrangement could be changed if expectations aren't met.

Today, all seven of Spiegel's employees telework. The difference, he says, is that they are all senior-level people whom he personally hired. Thanks to stock options and equity interest, they are highly motivated.

As an added bonus, Spiegel doesn't need office space at this point in his young company's development.

Even so, he advises managers to proceed with caution. "If I had to go back and manage a support team at a Fortune 1,000 company, I'd take a different stance," Spiegel says. "I'd want more control over what teleworkers are doing."

4 HOW WILL TELEWORK AFFECT COLLABORATION?

Think about the culture of your organization and how the employee fits into it. Some people are naturally creative, innovative and inspirational, notes Robert Keefe, president of the Society for Information Management and senior vice president and CIO at Mueller Water Products Inc. These people stimulate discussion and generate ideas, and others like to work with them.

"Some people are like the gel that holds the organization together," says Keefe. The organization would lose something if those people worked remotely 100% of the time. "That's a very soft intangible, but something that's often overlooked in team dynamics," says Keefe.

Communication is a related factor. Some companies are more reliant than others on informal communication, where an employee just walks down the hall to IT to solve a problem or hash out an idea, Holbrook notes. Moving a key IT employee out of that picture could upset that delicate balance.

For example, Intel relies on a high level of collaboration, according to Intel CIO Diane Bryant. The company found that projects were completed much more efficiently when all the IT workers were at one site rather than spread out over two or more sites — or in remote locations.

5 WHAT ABOUT EMPLOYEES 'LEFT BEHIND' IN THE OFFICE?

Timothy Golden, associate professor in the Lally School of Management & Technology at Rensselaer Polytechnic Institute, published a study earlier this year suggesting that allowing some employees to telecommute can decrease job satisfaction for co-workers who remain in the office and increase the chances that they will leave the company.

Golden studied a sample of 240 professional employees from a midsize company. The study found that the more people in the organization who teleworked, the less satisfied the officebound employees were.

There could be several reasons for this, according to Golden. First, there are fewer opportunities for workers to get to know one another, which could impede good working relationships. Second, the officebound workers may find themselves bending to accommodate the teleworkers — for instance, they have to schedule meetings around when teleworkers are going to be in the office.

And third, office workers may be more likely to be tapped for certain tasks simply because they are handy, whereas the teleworker is left undisturbed. "The teleworker may very well be available," says Golden. "but they aren't perceptually there in the moment."

While telework has gone smoothly for the most part at Cox Enterprises Inc., that misperception of availability has been a problem, says John Bell, assistant vice president of information systems engineering at the broadband service provider.

"Someone will stop by an office, and the door is closed and the lights are out," he says. "People think he's not available or that they may be imposing if they call him at home."

To combat that perception, Cox has started requiring teleworkers to post their schedules on their doors so other staff members know when they are available.

Golden suggests other ways to ensure that in-office employees aren't inconvenienced by at-home colleagues, including requiring all employees to be in the office at certain times or on certain days; reshuffling responsibilities so officebound employees aren't dependent upon remote workers; and scheduling informal social times, separate from formal meetings, to reinforce trust and camaraderie among the entire workforce.

6 DO YOU HAVE AN EXIT STRATEGY?

[illegible] counter-[illegible] to be thinking about an exit [illegible] while you're trying to approve a telework arrangement, but experts like

Keefe suggest that very thing.

Even as he's hammering out details on how often an employee will need to come into the office, Keefe puts a time limit on the teleworking arrangement. "You don't want to set a false expectation that this is the way it's always going to be," he says. "It's really highly dependent on the role they are in currently, and things change."

A new department manager may prefer to have workers in the office, for example. Or an IT consolidation project might require employees to come back to the office.

Particularly if the person is a high performer who might come up for a promotion, it's important to note that he might need to return to the office if his role changes.

Managers should also consider the possibility that telework can become too good of an offer for some workers. Strong performers might forgo advancement, or even leave the company, in order to continue teleworking. "It becomes a lifestyle," notes Keefe. "I've had a couple of key people leave the organization, so now I'm more cautious about that."

> **"People say they manage by results, but they also like to know whether the person is only active a few hours a day."**
>
> ERIC SPIEGEL,
> CEO AND CO-FOUNDER, XTS INC.

Ironically, the opposite situation can also occur: Employees who pushed for and received permission to telework may find it's not as wonderful as they expected. They may feel disconnected from the workplace and the office banter. Rather than admitting the mistake, they may look for work in another office.

In fact, there is a higher degree of churn among teleworkers today than in the past, according to Sean Ryan, an analyst at IDC. Statistics indicate that telework tends not to be a permanent arrangement, he says. "They telecommute for a while but then go back into the corporate world," Ryan says.

Indeed, research from 2005 published in the *Journal of Management* suggests that allowing insufficiently screened employees to work more than three days a week outside of the office results in long-term decreases in productivity and morale and increases in staff turnover. "They move on to jobs where they feel more included," says Gartner's Morrison.

The consensus among managers who have had it both ways is that telework should never be an all-or-nothing proposition. And whether you ultimately decide to allow an employee to work from home full time, part time or not at all, your decision should be the result of careful consideration of the needs of the worker, his colleagues and managers and — most important — your business. ■

Harbert *is a Washington-based freelance journalist.*

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The Creativity Conundrum

You can't manage creativity, but you can manage *for* it. Here's how.

Recently, a two-day colloquium at Harvard Business School brought together business leaders from innovative companies such as Google, E Ink, Novartis and Ideo to discuss creativity in organizations. In this month's Harvard Business Review, **Mukti Khaire** *and co-author Teresa M. Amabile report on the group's conclusions. Khaire, an assistant professor at Harvard Business School, shared some key insights with* Computerworld's *Kathleen Melymuka.*

Ingredients for Innovation

Stanford University professor emeritus Jim March wrapped up the Harvard Business School colloquium on creativity with what he called the beginnings of a theory of novelty. He named three conditions for something new to happen:

SLACK. Sufficient time, resources and breathing room for exploration and experimentation.

HUBRIS. The ability, desire and willingness to take risks.

OPTIMISM. A belief that something better than the status quo is possible – that something new can work.

Why is creativity suddenly coming off the back burner? When business is more difficult and things more competitive, everyone is trying to run faster than everyone else to get answers, so you need to keep finding novel solutions to the problems everyone faces. That is what makes creativity more important for managers today. In IT particularly, yesterday's innovation is today's commonality. People catch up even faster in IT, and so there is demand for newer systems all the time. And where IT is viewed as a cost center, it's even more important to add the value expected of IT.

Let's talk about some leadership priorities in managing for creativity. You write that the first is to draw on the right minds. How does a manager find those? We're not saying there are some people in charge of being creative. But in terms of getting the right minds, at the beginning it would be that you have a certain culture and incentives that would draw the kinds of people who are willing to take some risk — personal and professional — to do something different. Then you want to not have one particular type of "right mind" or one idea of what the right mind would be. You want diverse capabilities and the diverse skills they would bring to any problem.

Next comes collaboration. You talk about using analogies and metaphors to get people focused. When you are trying to achieve something really radical, by definition, that doesn't exist. So if people don't have a sense of where they are going, it's hard to rally around it. That's where metaphors and stories and analogies work, because it gives them a sense of what they're working toward — for example, "We want to build the Facebook of knowledge management."

In IT particularly, yesterday's innovation is today's commonality.

There was a lot of discussion of the role of diversity. One interesting point was the value of identity integration to enhance creativity. Can you explain? People are complex and identify with different roles at different times and in different contexts, but the real punch is packed when people can draw from each of the aspects of their identity to apply diverse perspectives to a situation. Take engineers who are also designers. If they express both sides, that

Continued on page 33

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- USCG, Office of Performance Management and Decision Support, Washington, DC

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FedEx Services, Collierville, Tennessee

Finalists:
- New York City Department of Information Technology and Telecommunications, New York, New York
- The Salvation Army, USA Western Territory, Long Beach, Ca[illegible]
- Schneider National Inc., Greenbay, Wisconsin
- Transportation Security Administration, Arlington, Virgin[illegible]

Expediting Information Delivery, Retrieval, Reporting and [illegible]

USPS IT Delivery and Retail Business [illegible] Washington, DC

Finalists:
- Airlines Reporting Corporation, Arlington, [illegible]
- Corporate Express, Broomfield, [illegible]
- Cox Enterprises, Inc., Atlanta, [illegible]
- [illegible]

Innovation and Promise in [illegible]

[illegible]

Finalists:
- [illegible]
- [illegible]
- [illegible]
- [illegible]
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- Matthew Meinert, U.S. Army (C E[illegible]
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- Eric Piersol, A'ltech Biotechnology
- Michael Scarbrough, [illegible]
- Paul Valle, Papa Gino's, [illegible]
- Scott Zimmerman, [illegible]

Continued from page 30

allows for Pixar and *Toy Story*. To integrate facets of both identities leads to the whole being greater than the sum of its parts. People do this a lot in daily life, but we tend to do it at a more superficial level.

And at work, people often tend to do the exact opposite. For example, a woman in IT may try to shut off her feminine side. Exactly. [I might] try not to bring personal things — who I am — into my profession, but who I am may really have some bearing on a problem.

You also discuss the need to look outside the organization. Can you discuss open source from the nonsoftware perspective? Essentially, the meaning of the term is "open collaboration among people without a sense of competition." The airplane was a complex enough innovation that the Wright brothers alone couldn't have solved the problems. In the early stages of that invention, there were a lot of thinkers, exactly like the open-source people today, working on smaller aspects of the larger problem. Collaboration toward the greater goal united all of them. Once the Wright brothers recognized the commercial and military potential, it became more competitive. But before that, it was very similar to what we see in open-source platforms today — which only goes to show that this notion that people will contribute freely to a particular idea is not new.

You note that as creative ideas churn through the bureaucracy, they tend to get beaten into the shape of the existing business model and lose their innovative power. So where is the balance between diversity of input and the need to protect an idea from being deflated by diverse input? I think it's a question of stage. You start with brainstorming, a nonjudgmental search for ideas. There you want as much diversity of input as possible. At a later stage, if marketing comes back and says, "This needs to be modified," if the need for that is not just to make things easier for them but because of real consumer feedback to increase usability, there is still space to accept that. But when there is browbeating to fit a square peg into a round hole because they just don't want to make a square hole, that's a problem. So you need to have incentives throughout the organization so that the norm is to have everybody engaged in novelty rather than trying to make life easier.

That's asking a lot of a manager. Yes. But if, as a manager, you are collaborative and collegial, then you would know this about the people you work with and would be able to do this right. Good mangers do this automatically. ■

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WHEN THE Watchdog IS THE Underdog

In data security, many of the toughest challenges have nothing to do with the bad guys. By Lisa Vaas

THINK your security staffers are trustworthy? Competent? Knowledgeable? Listen to a security professional's horror stories, and you might think again.

Here's one from Kevin McDonald, executive vice president at managed services provider Alvaka Networks, author of several books on cybersecurity and a member of the AeA technology trade association:

A construction company client of his had a senior IT person who was also in charge of security. Somehow, this head of security convinced the firm's owner that it would be cheaper to store various company databases at his own home, where he already had fiber-optic lines installed, rather than elsewhere off-site.

You can see this one coming a mile away: A conflict arose between the employee and his employer. Before you could say "internal threat," the security worker was sending threatening e-mails to the construction firm's customers, telling them that he had their private information.

The action "fundamentally put this guy out of business," McDonald says. It took six months to shut down the rogue employee, since — of course — he

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was an authorized user. Only when the employee publicly threatened, online, to use the data in an illicit manner was the FBI able to enter his home and end the standoff.

This is a worst-case scenario, but the security sector is plagued with problems, from bad guys to bad buys, weak budgets to weak workers. Here are some common trouble spots, along with tactics for dealing with them.

BUNDLED BADNESS

At this moment, somewhere in corporate America, security staffers are cursing their C-level execs for foisting bundled junk on them. Here's how it works: Salespeople from the big security vendors convince the execs that it makes sense to buy a package that does desktop antivirus, e-mail security, intrusion detection and Web filtering, all for $38 per seat.

What's wrong with that picture? "You've commoditized those critical parts of the security infrastructure," says the head of a security software vendor who requested anonymity. "The problem is, the perception of C-level execs is that security is a commodity — one [application] is the same as the other."

But no vendor is good at everything. Organizations whose executives buy bundles do save money. Unfortunately, they often get "really subpar security, sometimes dangerously so," says the head of security.

So how do you convince a boss who's sold on a bundle? By getting security personnel in on the decision-making process early, well before there's money on the table.

Good communication and good relationships are key. "I recommend that security get users to buy into them as people," advises McDonald. "Do 'lunch and learn' internally. Bring staff in, bring management in, and have them understand why the things you're saying are being said."

That helps security pros combat the perception that they're "just in the way," McDonald says. "Ask the employees and management, 'So, I have these things I'm being told I have to do — say, to secure PCI information, or to protect assets of the organization, and do other things mandated by government. What would you do if you were in my seat?' "

Another approach is to take personalities out of the equation. That's what the Pennsylvania state government did. Before Bob Maley took on the job of chief information security officer there in late 2005, the state had adopted a clear set of standards for selecting security products.

But Maley had other problems. Not being able to afford qualified security professionals has been one of his biggest challenges in heading up cybersecurity for state government. In fact, he estimates that there's a pay differential of 20% to 100% between the public and private sectors.

"I lost a gentleman who doubled his salary when he went to the private sector," Maley says. "For me to get a security expert in, even if I would take them up to the highest step in their pay category, it doesn't come close to what they could get in the private sector." So even if Maley snags a good hire, he knows he probably won't be able to keep him for the long haul.

LURE OF EXPERIENCE

Maley's solution: Hire promising newbies who are "a little wet behind the ears." The lure for them is an environment where security staffers have the chance to spot cyberattacks as they hatch. In the past six months, for example, his team has seen three variants of the Storm Trojan horse that hadn't been spotted elsewhere.

That's not surprising, because Symantec Corp.'s recent Internet Security Threat Report cited a shift toward attacks aimed at trusted Web sites, such as social networking or governmental sites.

"I've got a team that has the opportunity to fight that

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"I lost a gentleman who doubled his salary when he went to the private sector."

BOB MALEY, CHIEF INFORMATION SECURITY OFFICER, COMMONWEALTH OF PENNSYLVANIA

In data security, as in much of IT, the value of certifications is often questioned.

"For years now, people [have been] getting certifications left and right," says Bob Maley, chief information security officer for the Pennsylvania state government. "They might have five different acronyms after their name."

But how much are those actually worth? It depends.

"Honestly, in the certification industry, there are brain-dump sites," Marley says. "People can get certified without having experience."

"We hire guys with wonderful degrees who are just idiots," agrees a security vendor who requested anonymity. "We've had guys in here who've got degrees and certifications, and they can't even wire a network. They know the words, but they don't know how to sing the song."

Maley says that from what he can tell, hiring managers see the acronyms, get impressed and let extensive vetting slide. Instead, they should look at a résumé and then map the experience back to the listed certifications, he says.

That said, Maley thinks some security certifications are meaningful. He would hire CISSPs (Certified Information Systems Security Professionals), CISAs (Certified Information Systems Auditors) or CISMs (Certified Information Security Managers) – if he could afford them, that is.

"CISSP – I wish I could say I'm hiring them," Maley says. "I can't pay those guys enough."

As far as CISAs or CISMs go, Maley says that CISSPs typically have those certifications, which reflect what he calls built-in experience. "You can't get those unless you show you have that experience," he says.

– LISA VAAS

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kind of stuff, analyze it and be on the leading edge in the fight between the bad guys and us," Maley says.

Recruits get hands-on experience on projects that are both significant and exciting, Maley adds. For example, in order to halt repeated virus outbreaks, a penetration-testing rollout was partially automated with tools from Core Security Technologies.

Maley also coaches his green recruits in building their résumés. He knows that eventually they'll leave, but if they're bolstering their credentials, having fun and learning in the meantime, chances are they'll stay that much longer. That's a trick that any revenue-challenged organization can employ to good effect.

Many security shops are stuck with an underskilled employee or a security newbie. If you're in that situation, you've got to limit the staffer's potential to blow everything up. Do that by having him work on less-critical systems, suggests Anthony Scalzitti, a security engineer at a major security software company that he did not want identified. For example, you could have the staffer investigate suspicious log activity or intrusion-detection system reports.

Another useful security role that won't get a skill-challenged employee into trouble is attending business meetings to keep the security group apprised of upcoming projects. Sitting in will be educational for him, and his presence at the meetings will remind business people to build security in from the design phase instead of shoehorning it in later.

"Even if they don't contribute a lot, if they're in the meeting, [the other] people say, 'Oh, we have security here,' and they feel obliged to think about security," Scalzitti says. "These are useful roles, and mistakes generally don't impact business."

Another sad fact of life is that there are security prima donnas who regard certain tasks as unworthy of their time, such as reviewing logs or activity alerts, doing simple configuration reviews or meeting with other business groups.

Scalzitti says he has had success putting prima donnas to work researching security incidents that appear in the media. The point, he says, is to get the security elitist to discover that 80% of incidents are the result of simple opportunistic attacks.

> **"The problem is, the perception of C-level execs is that security is a commodity."**
> **HEAD OF SECURITY**
> AT A SOFTWARE VENDOR

"In information security, there are so many opportunities for an attacking hacker," Scalzitti says. Unless they have a grudge against a particular company, he notes, "they're going to go for low-hanging fruit."

Have your prima donnas research that low-hanging fruit. "It may take some time, but they come to realize the basics of how [bad] things happen," Scalzitti says.

THE BAD SEED

Finally, back to our rogue employee. You can coach the security newbie, tutor the underskilled and challenge the underpaid, but dealing with a true bad apple is another story entirely. The only sure way to handle him successfully is to not hire him in the first place.

Luckily, many organizations have a 90-day probation period for new hires. Watch your new security employee closely during that time to determine whether you really want him on your team. Most states make it difficult to dismiss an employee after those 90 days are over. So do your due diligence before extending a job offer, and if your weirdometer begins to click, pay attention. ■

Vaas *is a freelance technology writer and can be reached at lisavaas@lisavaas.com.*

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Patching Program Still Under Fire

Having **allies on the business side** helps, **but the sysadmins** who will do the work **remain unconvinced.**

Trouble Ticket

AT ISSUE: Setting up a regular patching cycle will require buy-in from the sysadmins who will do the patching.

ACTION PLAN: For now, focus on getting systems up to date, and stay on message.

My situation rapidly went downhill after I started talking about the need to proactively manage the vulnerabilities on our systems. My peers — other leaders in IT at this company — are threatened by my open approach to change and by being put in the spotlight by the new guy in charge of security. As a first step toward resolving this conflict, I'm trying to build alliances.

IT works for the business, and the people in the field running corporate operations are IT's customers. I assumed that the business owners have some influence over the services IT provides them, and that gave me an opening. I figured that if I could convince the business managers that vulnerability management is important to their operations, then perhaps I could add their voices to mine and thus gain credibility and influence.

So far, I've had success with this approach. Once I talk to business managers about what it is I'm trying to do, they become supportive of the idea of stabilizing and improving the security of their systems through patching.

The IT systems administrators and their managers are the people most resistant to applying patches — and it's the sysadmins who would have to actually do the work. Predictably, they are falling back on the old argument that patching destabilizes systems and causes more problems than it solves. I'm trying to make them see it from the viewpoint of a security manager: Unpatched operating systems are a huge security risk in any environment.

But the sysadmins don't see why it's important to do the updates when everything already seems to be working. Their attitude is that we haven't had any problems yet, so why should they incur extra work and operational risk just to make the security team happy?

■ I'm trying to make the sysadmins see things from the viewpoint of a security manager.

I'm trying to bridge the differences in our perspectives, but I'm not having much luck. Looking only at return on investment, the sysadmins have a pretty solid argument. There's no question that a comprehensive patching program is expensive. You have to test the patches, and it seems as if there's always another one being released. Then you have to track down every machine that needs the patch and make sure it's fully up to date. But as the security manager, I have to look beyond immediate ROI. A security incident could be more costly than an ongoing patching program.

PATCH CATCH-UP

I feel that if we leave our infrastructure unpatched, our servers could be vulnerable to a breach, which could result in devastating losses. It's a core belief of mine that a mature IT infrastructure should include a repeatable, ongoing program of vulnerability remediation. But explaining that to sysadmins who don't want to do it is a tall order.

Right now, I'm focusing on getting all our systems up to date. But a successful vulnerability management program depends on having a repeatable process that results in a collection of "snapshots" of the overall security posture at various points in time. These snapshots tell us the threat model at that moment, the protection requirements, the environment being protected and the state of the defensive technology.

A successful catch-up effort will give us our first snapshot, the baseline. But as technology and the business environment evolve, the technical controls that are part of this snapshot will become less effective. That's why I'm already thinking ahead to establishing a patch cycle.

JOIN IN
To join in the discussions about security, go to **computerworld.com/blogs/security.**

Gaining allies is bringing us closer to this goal. I'll keep you posted on how my campaign fares with the systems administrators. ■

This week's journal is written by a real security manager, ***"J.F. Rice,"*** *whose name and employer have been disguised for obvious reasons. Contact him at jf.rice@engineer.com.*

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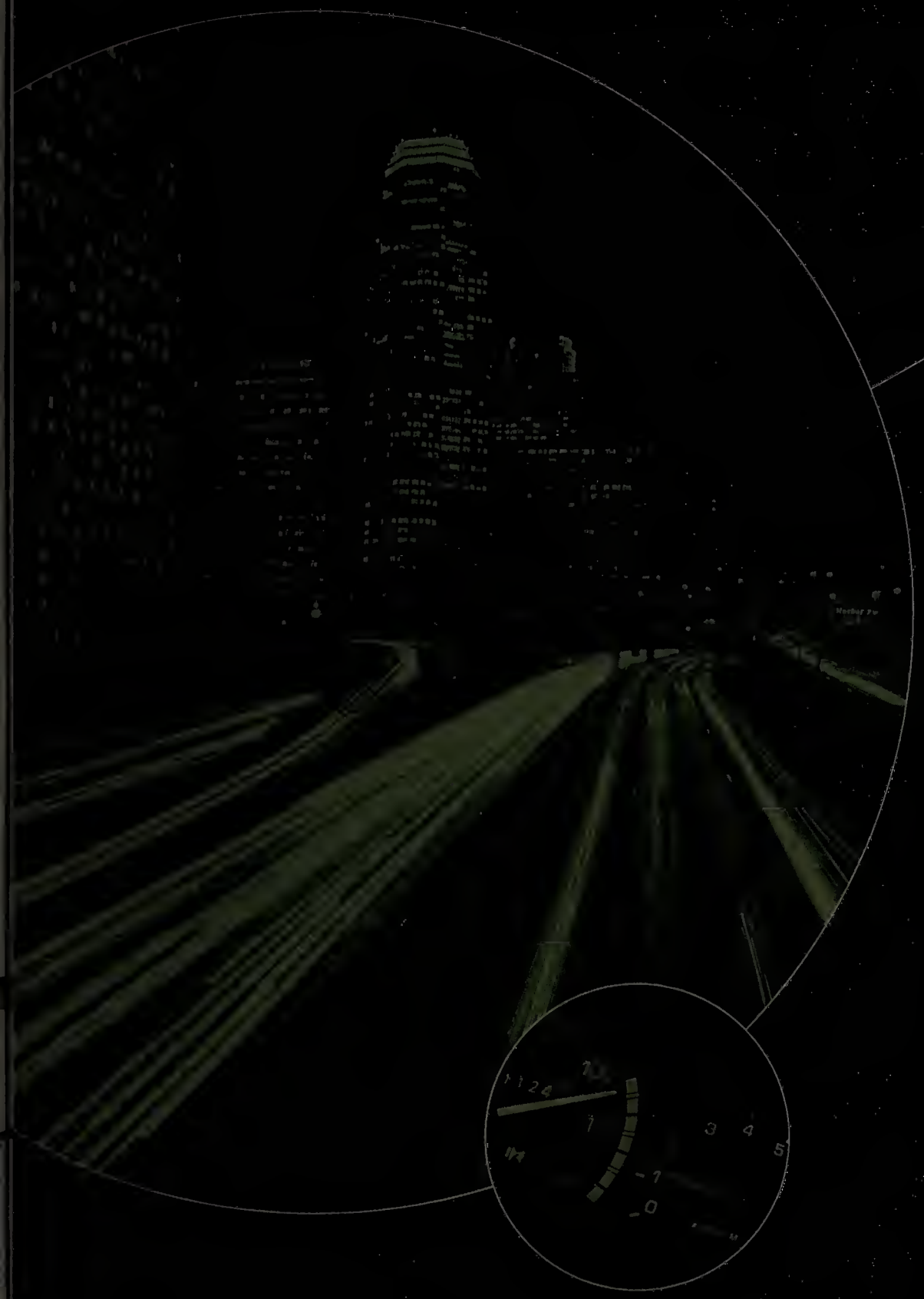

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■ OPINION

Paul Glen

Experience: What's It Really Worth?

MANAGERS SEEM to have mixed feelings about experience, but you wouldn't know it from reading a typical job advertisement.

Most of them read like a laundry list of required educational experience, managerial experience, specific technical experience, project role experience, industry experience, business application experience, and on and on and on. This experience thing must be amazingly powerful. Time served must be a measure of something really important.

But if experience is at such a premium, why are there so many articles about how hard it is for older IT workers to find a job? Wouldn't you think that someone with 35 years in IT would be fighting off suitors, and fresh graduates would be offering their services free of charge in order to obtain a dose of this golden elixir?

Why don't recruiters advertise in *AARP* magazine rather than throwing parties on Ivy League campuses?

The love-hate relationship managers have with experience seems to be based on their acceptance of four questionable and incompatible premises:

1. Experience implies knowledge. The obvious reason to look for people with experience is that managers are often risk-averse and believe that hiring someone with experience is safer than hiring someone without it. If you've done this exact job three times before, then you must know how to do it by now.

2. Experience implies rigidity. While managers apparently think that some experience is a good thing, they also seem to assume that too much of a good thing is not so good. If you have too much experience with the same role, technology or type of project, something must be wrong with you. You must be stuck in your ways; you must have become inflexible.

■ My own experience has taught me that most people don't really absorb the lessons that their experience offers.

3. Youth implies creativity. In many cases, we love to hire young people precisely because of their lack of experience. They are not set in the old ways and are free to come up with new ideas and approaches that people with experience might never consider. They are a breath of fresh air to clean out the stale, old smell of experience.

4. Youth implies drive. And finally, we love to hire the young because they have so much energy and ambition. They are dying to go out and make something of themselves, to climb mountains and explore new horizons. Experience hasn't yet taught them about the futilities of work and the frustrations of life. They are not yet beaten down and resigned.

All of these assumptions presume that experience is either a great teacher or a cruel one. But the truth is that experience doesn't assure knowledge or rigidity any more than youth assures creativity or drive. Passing through school can't guarantee that a student has learned, only that she has had a chance to do so. Learning is ultimately up to the student. Similarly, experience implies only that someone has had the opportunity to learn, not that she has actually learned anything.

My own experience has taught me that most people don't really absorb the lessons that their experience offers. In one sense, they haven't so much gained experience as they have had things happen to them. They become neither knowledgeable nor jaded. They haven't processed the ideas or compared real-world happenings with their theories of how the world works. Without this processing, experience isn't really a great teacher or a cruel one; it's only a way to mark the passage of time.

If you really want to make use of someone's experience, or of your own, find a way to gauge not how much time has passed, but how much of that experience has been turned into wisdom. ■

Paul Glen *is the founder of the GeekLeaders.com Web community and author of the award-winning book* Leading Geeks: How to Manage and Lead People Who Deliver Technology *(Jossey-Bass, 2003). Contact him at info@paulglen.com.*

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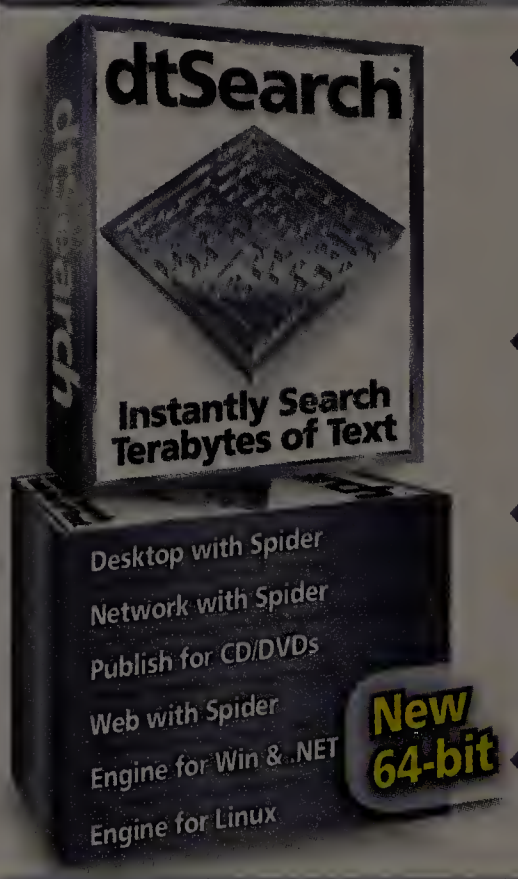

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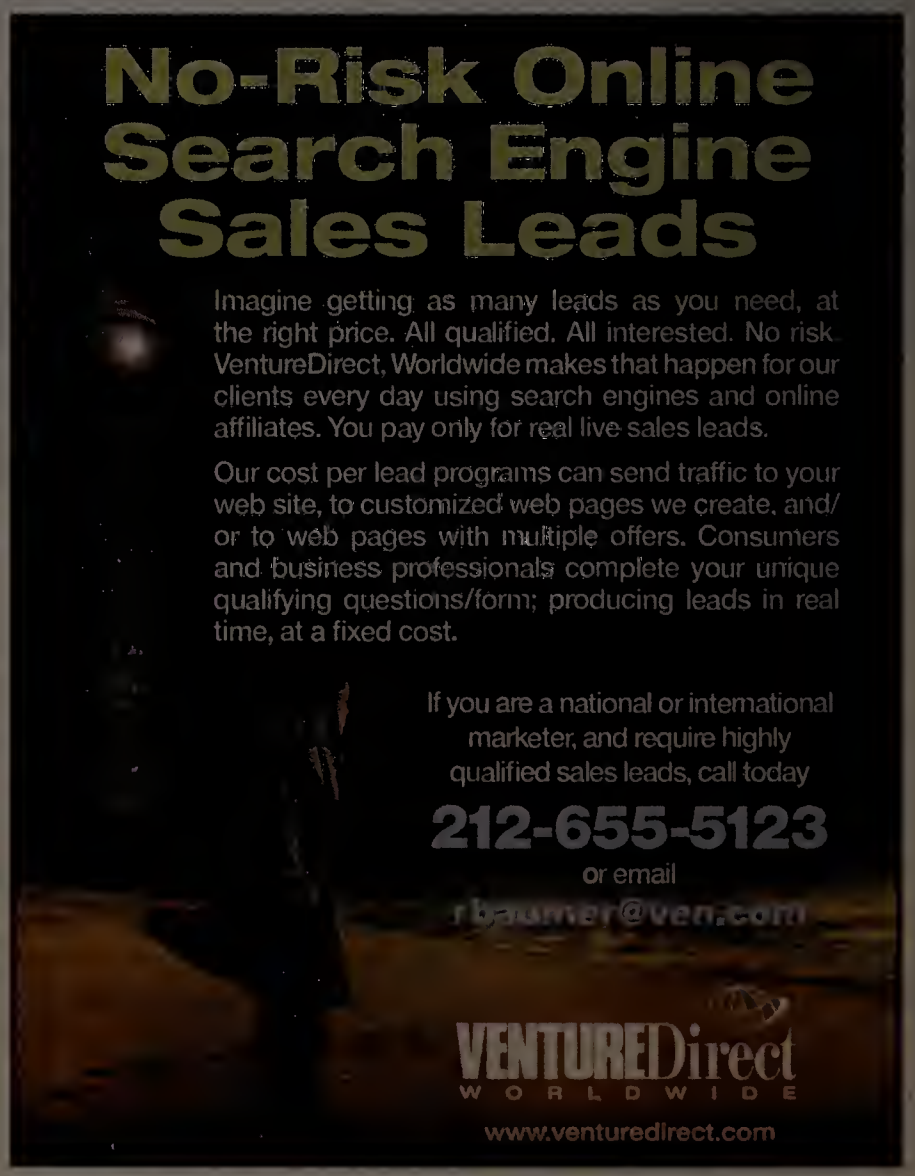

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Career Watch

■ Q&A

Cheryl Cran

The author of **Control Freak Revolution** and president of Synthesis at Work Inc. explains why she believes **control freaks can make the best leaders.**

"Control freak" is a pejorative in the English language. How do you see this character trait as a positive? You are right. "Control freak" has always been used in negative terms. I say that there are positive elements to being a control freak. Typically, control freaks want order, consistency and perfection. Their behavior is negative only when they insist everyone be just like them.

I am encouraging control freaks to shift to positive ways to use control.

Surely no one wants a control freak as a boss. Actually, employees prefer to work for someone who has a clear vision, goals and purpose. Control freaks have all of these things. When control freaks learn to focus on balanced control, they are well respected. Give me a control freak boss over a wishy-washy wimp any day.

What does it take to become a "good" sort of control freak? To be a "funky" control freak, the person needs to be highly self-aware. They need to catch themselves when they exhibit negative and destructive behaviors. They need to be other-focused vs. self-focused. They need to be self-revealing about their "control freakness."

Are you a control freak yourself? I am a recovering control freak! I used to be the type of leader who had to over-control. This only got me so far in my career. I had a couple of great bosses who bluntly told me I would not get to the executive level without changing my behavior. They were right – my success skyrocketed when I sought coaching to help me change.

– JAMIE ECKLE

PAGE COMPILED BY JAMIE ECKLE.

THE AGING WORKFORCE

Median age of the labor force by sex, race and ethnicity, with projections for 2016

	1986	1996	2006	2016
ALL WORKERS	**35.4**	**38.3**	**40.8**	**42.1**
Men	**35.7**	**38.3**	**40.6**	**41.6**
Women	**34.9**	**38.2**	**41.0**	**42.8**
White (non-Hispanic)	**35.9**	**39.1**	**42.4**	**44.2**
Black	**33.3**	**36.4**	**38.7**	**39.8**
Asian	**35.3**	**37.0**	**40.6**	**42.9**
Hispanic origin	**31.3**	**34.5**	**36.4**	**38.0**

SOURCE: U.S. BUREAU OF LABOR STATISTICS

Tracking the **Class of '93**

TEN YEARS AFTER graduation, members of the class of 1993 with a degree in computer science had been at the same job an average of about six years. That's longer than any of the other categories of degree-holders that were looked at in a study produced by the U.S. Department of Education's National Center for Education Statistics. The results were reported in the summer 2008 issue of the Bureau of Labor Statistics' *Occupational Outlook Quarterly.*

The study also found that those with a computer science degree were more likely to be employed both in 1994, one year after graduation, and in 2003, 10 years after graduation. In both years, their salaries were above the average for the study, but the computer science group constituted just 2% of all undergraduate degree recipients in 1993. Those with degrees in arts and humanities were making the least one year after graduation ($25,000), and those with education degrees were at the bottom of the salary rankings 10 years after graduation ($43,800).

One year out of school, those with degrees in health, engineering, and business and management were all making more than those with computer science degrees, but 10 years after collecting the sheepskin, only engineers had a higher salary average.

Average earnings (in constant 2003 dollars) of 1993 bachelor's degree recipients employed full time:

	1994	2003
Computer science	$53,400	$72,800
All degree holders	$30,900	$60,600

THE REPLACEMENTS

82% Percentage of CIOs who say they expect their replacement to be from within their companies' ranks.

38% Percentage who say their companies have a formal succession plan in place for the CIO position.

SOURCE: CDW IT MONITOR SURVEY OF 1,000 IT DECISION-MAKERS, JUNE 2008

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TRUE TALES OF IT LIFE AS TOLD TO SHARKY

No Change

User can't get her new company-issued laptop to work at home – moving the network cable from her home PC to the laptop doesn't get her an IP address, and the company help desk can't figure it out. So this pilot fish who's the webmaster for the user's department offers to stop by her home to take a look. "Turned out the cable company has a 'security' feature that allows only one device to receive an IP address, either one computer or one router," says fish. A router isn't in the budget, so fish just changes the laptop's MAC address to match the PC's, and it works. Flash forward several months: IT reloads Windows on user's laptop to fix a problem, and again the laptop won't work at home. User calls fish, who suggests that she write down the MAC address from her home PC and have IT change the laptop's to match. "Next day, she steps into my office, obviously frustrated," fish says. "Two of our IT staffers explained to her that the MAC address is hard-coded into the laptop, so there's no way to change it. I suggest that she ask them why I could change the MAC address but they can't. She calls me back a little while later to tell me that IT figured out how to 'override' the MAC address. But they still insist it cannot be 'changed.' I love semantics . . ."

The Best Defense

Flash back to 2000: Developer pilot fish and his team talk with his company's telecom group about developing a program that could do a denial-of-service attack on anyone attacking a company server. "We mentioned it to Audit, since they normally do a test on the servers, and they believed we had already written it," says fish. "For the past eight years, whenever they do an audit and do not follow the rules, we offer to test the counterstrike program. They immediately back down and stop the test. Slight problem: We've never developed the program," fish says. "But people don't know that. I suppose one year they may tell us to test it. Until they do, it will continue to do its job."

Then We'll Test

This pilot fish sets up software for a large customer who's a bit gun-shy when it comes to upgrading Java. "Past Java updates have caused problems with some of the customer's custom-built applications," fish says. "So customer's management sends out a request for all of its application managers to report back if the new Java version will work with their custom apps. I ask if I can get the new version loaded to the test servers for the application managers to test. Management says no – the new version is not to be released, even for testing, until the application managers report the results of their testing."

■ *Report your true tale of IT life to Sharky: sharky@computerworld.com. You'll snag a snazzy Shark shirt if I use it.*

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■ FRANKLY SPEAKING

Frank Hayes

Let's Get Visible

THINK VOLATILITY is confined to the stock market? Of course you don't — that wild ride is now the defining theme of business for the foreseeable future. That means all bets are off when it comes to IT budgets, IT projects and how much cooperation IT will get from the rest of the business.

Budgets? You've been through this before. You knew that charming piece of fiction approved by upper management wasn't likely to survive the year without cuts. Still, you were optimistic. And hey, that budget lasted all of two weeks into the new fiscal year.

But now you'll be cutting, and cutting, and cutting some more — just like the rest of the business.

As budgets go, so go projects. Each of your projects has a business sponsor, right? But now, any project's sponsor could disappear at a moment's notice. That might mean the sponsoring executive had to cut his own budget, and the project he supported no longer fits into his plans. Or the business sponsor could just disappear because he has bailed out or been laid off.

An empty office means no business sponsor — and that means no project.

And when it comes to cooperation, forget it. Everyone on the business side will hunker down, run lean and hope they just get squeezed, not strangled. The last thing they'll think about is IT projects.

Maybe that sounds tempting for IT, too. But don't go there.

Remember, IT isn't like sales or manufacturing, where results show up in easy-to-grasp numbers. Even a hunkered-down sales force brings in some orders, and a lean-running plant produces some widgets. They still justify their scaled-back budgets.

But if IT really pulls back from projects, it looks like we've stopped doing anything. We haven't, of course; we're still performing all those pesky operational things. But networks, servers, phones and applications that keep running — well, that's just background noise to users. Sure, they depend on them. But they don't notice them.

■ Let's face it: Without projects, IT is invisible. That's not fair, but it's reality.

Let's face it: Without projects, IT is invisible. That's not fair, but it's reality. And especially at times like this, we need visibility.

Then again, there's good visibility and bad visibility. It doesn't help if top management sees us burning money on projects that are about to be spiked. We need visibility doing *successful* projects.

But how? The standard approach is to suspend all projects that won't produce a fast return on investment. Trouble is, that prioritizes projects on the basis of turnaround, not business value. Quick hits are great, but churning out trivial stuff will impress no one.

Here's another way: Pick out your most important projects. Now go to each business sponsor and ask what piece of his project will have the greatest value if you can turn it around quickly.

That's right: You're carving out quick little successes from big, impossible-to-deliver-soon projects.

But that's not all you're doing. You're also getting a reality check on each project from the guy who's best able to give it to you.

The business sponsor knows his plans. He can tell you if he's no longer able to support the project. Or if it needs to do something different. Or if it's more important than ever. Or if tweaking it will slash the schedule and boost the payback.

In short, in the midst of all this volatility, business sponsors can deliver visibility — visibility *into* the business that lets IT remain visible *to* the business.

And with that visibility, IT can keep delivering value — no matter how wild things get. ■

Frank Hayes *is* Computerworld's *senior news columnist. Contact him at frank_hayes@computerworld.com.*

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